

THIRTY-THIRD ANNUAL REPORT

OF THE

DEPARTMENT OF MARINE AND FISHERIES

1900

FISHERIES

PRINTED BY ORDER OF PARLIAMENT



OTTAWA

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EXCELLENT MAJESTY

1901

To His Excellency the Right Honourable SIR GILBERT JOHN ELLIOT, EARL OF MINTO,
Governor General of Canada, etc., etc.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Legislature of Canada, the Thirty-Third Annual Report of the Department of Marine and Fisheries, Fisheries Branch.

I have the honour to be,
Your Excellency's most obedient servant,

LOUIS HENRY DAVIES,
Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES,
OTTAWA, December 31, 1900.

ALPHABETICAL INDEX

TO THE

FISHERIES REPORT

1900

A

	PAGE.
"Acadia," D.G. cruiser	258
Acclimatization of Fish, by Prof. E. E. Prince.....	lviii
Anticosti Island, remarks	xxxiv, 187
Areas—extent of water	xiii
Armstrong, Wm., hatchery officer, Newcastle, Ont	245
Association Bait Freezer.....	ix

B

Bait, cold storage	ix
Bay View, lobster hatchery.....	250
Bass, black, breeding of	228
Behring Sea Question, report	xxv
" Sealing Fleet of 1899 & 1900 and catch of seals.....	xxvi, 160
" Arbitration of seizures by Russia, 1892	xxviii
Belliveau, A. H., Inspector's reports.....	xxxv, 190
Bertram, A. C., Inspector of Cape Breton Island, reports.....	xxx, 35
Biological Marine Station.....	xi
Bounties Fishing regulations	10
" Statement of claims received and paid, 1899.....	12
" General remarks.....	xiii, 15
" Statement, comparative, received and paid since 1882	16
" Statement of all vessels receiving it, 1899	19 to 34
British Columbia, Reports on fisheries by Inspector C. B. Sword.....	xxxvii, 156
" Reports on fish culture by	233
" Seal catch, 1899.....	160
" " 1900.....	xxvi
" List of Salmon canneries and pack of 1899.....	159
" Statement of catch and material, 1899.....	164, 165
" Expenditure.....	3, 4
Bureau, Fisheries Intelligence.....	276
" Report on, by Mr. Mackerrow.....	276
" Report on cod, herring, lobsters, mackerel, salmon, etc	276 to 307

C

Cape Breton Island. (See Nova Scotia District No. 1).....	xxx, 35
" Fisheries Intelligence Bureau reports	289 to 298
Catellier, L. N., reports on fish culture.....	242
Chapman, R. A., Inspector, N.B., reports.....	xxxii, 107
Coast, extent of	xiii
Cod, remarks on	xix, 36, 185
"Constance," D.G. cruiser.....	274
Colcleugh, F. W., hatchery officer and inspector.....	145, 248
Cruisers, Canadian, list of, stations.....	258
Culture of fish. (See "F.")	
"Curlew," D.G. cruiser.....	258, 270
Cunningham, F. H., Inspector, report.....	xxxv

E

Expenditure.....	1
" Subdivision by provinces	2
" Fish culture.....	3
" Fisheries protection service	5
" Statement, comparative	8
Export of fish from Canada.....	xiv

F

	PAGE.
Fish culture	xxiv
" Report on, by Prof. E. E. Prince, commissioner	223
" Breeding brook trout	234
" Reports of officers in charge of hatcheries	233 to 252
" List	xxix
" Hatcheries in British Columbia	224, 233
" Nova Scotia	226, 234, 250
" New Brunswick	227, 236, 238
" Quebec	225, 242, 244
" Ontario	245, 247, 251
" Manitoba	248
" Expenditure	3
" Oysters, report on. (See letter "O.")	
Fisheries Protection Service	xxiv
" Report on, by Commander O. G. V. Spain	258
" Cruisers, their captains and their stations	258
" Expenditure	5
" <i>Modus vivendi</i> licenses	264
" Instructions to captains of cruisers	259
" List of U.S. fishing vessels entering Canadian ports	266
" Reports from captains of cruisers	270
Fish fair at Campobello, N.B.	102
Fish-ways	102
Fishery officers, staff	xxviii
" Intelligence Bureau. (See letter "B.")	
" Bounties. (See letter "B.")	
" Statements or statistics. (See letter "S.")	
" Season of 1900, remarks on	xxx
Finlayson, Alex., hatchery officer at Magog	244
Fish, acclimatization of, special report on, by Prof. Prince	lviii
Ford, L. S., Inspector of Fisheries, reports	xxxi, 46
Fraser River hatcheries, B.C.	224, 233
Fry, distribution of	229, 230
" Planting of, its comparative advantages, by Prof. Prince	xli
Fundy, Bay of, its fisheries	98

G

Grand Manan fisheries	103
-----------------------------	-----

H

Hatcheries, new	221
" Report on. (See also fish culture)	233 to 252
Herring, remarks on	100, 186
Hockin, R., Inspector, reports	xxxi, 41

I

Intelligence Bureau. (See letter "B.")	
Inspectors of Fisheries, list of	xxix
" Reports of. (See each Province)	
Imperial Privy Council, judgments <i>re</i> fishery rights	ix

K

Kemp, Ernest, oyster expert's report	253
Kent, Capt. W. H., cruiser "Kingfisher," report	258, 273

L

La Have, N.S., fishing fleet	283
Lake Superior, report and statistics	166, 168
" Huron	170, 172
" Erie	176
" Ontario	178
" St. John	191
Lobsters, Remarks on	xv, 35, 44, 108, 186
Lunenburg's fishing fleet	282

M

Magog Hatchery	244
Marine Biological Station	xi, 102
Magdalen Islands	187

SESSIONAL PAPER No. 22

M—Concluded.

	PAGE.
May, Capt. Geo. M., of the "Constance"	274
Mackerel, Remarks on	37, 43, 186
Manitoba, Report by Inspector F. W. Colcleugh	145
" Statistics of fisheries	148
Matheson, J. A., Inspector, P.E.I., reports	xxxiii, 133
Miles, H. S., Inspector, New Brunswick, reports	xxxiii, 109
Miller, E. W. Inspector, N.W.T., report	150
Miramichi Hatchery, N.B., report	238
Mowat, Alex., hatchery officer at Restigouche	240
Moisie and Mingan divisions	188, 202
McCluskey, Chas., hatchery officer's report	236
Mackerrow, A. D., Intelligence Bureau	276 to 307

N

New Brunswick, Report of District No. 1, by Inspector J. H. Pratt	xxx, 98
" " 2 " R. A. Chapman	xxxii, 107
" " 3 " H. S. Miles	xxxiii, 109
" Synopsis of New Brunswick fishery overseers, reports	103, 110
" Statistics of Fisheries, District No. 1	112
" " " 2	116
" " " 3	124
" Statements of value of fishing materials, &c.	115, 123, 126, 132
" Recapitulation of the yield and value of fisheries	131
" List of vessels receiving bounty	29
" Movements of fish, Intelligence Bureau, reports	300
Newcastle, Ont., hatchery	245
Nova Scotia, Report of District No. 1, by Inspector A. C. Bertram	xxx, 35
" " 2 " Robert Hockin	xxx, 41
" " 3 " L. S. Ford	xxx, 46
" Synopsis of overseers, reports	38, 44
" Statistics of Fisheries, District No. 1	48
" " " 2	57
" " " 3	74
" Statements of value of fishing materials	91
" Recapitulations of yield and value	90
" List of vessels receiving bounty	19
" Movements of fish, Intelligence Bureau	276
N.W. Territories, Report on fisheries by Inspector E. W. Miller	150
" Statistics of fisheries, &c.	154
North Shore Division, P.Q., reports	188

O.

Ontario, Reports of Inspectors	xxxv, 166
do Statistics of fisheries	168 to 184
do Statement of fishing materials	184
Overseers' Reports. (See each Province and District).	
Oyster Culture, Reports on, by Mr. Ernest Kemp	253
do Remarks on	134
Ogden, Alfred, hatchery officer, Nova Scotia	234, 250
"Osprey," Dominion Cruiser	258
Ottawa—hatchery	247
Orleans, Isle of, its fisheries	190

P.

Paris Exhibition	xxxvii, 256
Parker, Wm., hatchery officer—Sandwich, Ont.	251
Pêches Anglaises—wire weirs of Isle Orleans	190
Pelagic sealing industry	xxv
Planting of young fry, by Prof. E. E. Prince	xli
"Petrel," Dom. Cruiser	258
Prince Edward Island, Report on fisheries, Inspector J. A. Matheson	xxxiii, 133
" Statistics of fisheries	135
" Value of fishing materials and lobster plant, etc.	143, 144
" Intelligence Bureau reports	298
Prince, Prof. E. E., Commissioner, scientific reports	
" Planting of young fry	xli
" The vernacular names of fishes	xlvi
" Acclimatization of fish, fresh water and marine	lviii
" Fish culture	xxiv, 223
Pratt, Capt. J. H., Inspector, reports	xxx, 98
Protection Service, (See Letter F).	

Q.

	PAGE.
"Quadra," D. G. Steamer of B. C.....	258
Quebec, Reports on the Gulf St. Lawrence, by Dr. Wakeham.....	xxxiii, 185
" " " " by Dr. Lavoie.....	xxxiv, 189
" " " Inland divisions, by A. H. Belliveau.....	xxxv, 190
" Synopsis of overseers' reports, Gulf Division.....	187
" Statistics of fisheries for the Gulf Division	195 to 213
" " " " Inland "	218
" Recapitulation of yield and value of fisheries.....	221
" " of value of fishing materials.....	222
" Intelligence Bureau reports.....	302

R.

Revenue, Statements of	7
" Comparative statement of.....	8, 9
Report of Deputy Minister.....	ix
Reports of Inspectors. (See each Province.)	
Richmond Bay, P.E.I., re its oysters	255
Restigouche hatchery	240, 227
Regulations, re bounties.....	10
" " Protection service.....	259

S

Sandwich hatchery.....	251
Salmon, remarks on.....	37, 156
Seals, Behring Sea, remarks.....	xxv
Selkirk, hatchery Manitoba.....	248
Shad, remarks on	42
Sheasgreen, Isaac, officer Miramichi hatchery.....	238
Shediac oyster beds	254
Spain, O. G. V., Commander Fishery Protection Service, report.....	258
Staff, outside	xxviii
Statistics of fisheries. (See Statement, also different Provinces.)	
Statements, recapitulating the yield and value of fish since 1869.....	xxiii
" " fishing material, etc.....	xiv
" " number of fishermen.. ..	xvii
" of catch in detail. (See in each Province.)	
Sturgeon	110, 157
Storage, cold bait.....	ix
Sword, C. B., Inspector, British Columbia, reports.....	xxxvii, 156, 233
Sheppard, O. B., Inspector, reports.....	xxxvi, 166

T

Tadoussac, hatchery report.....	242
Tom cod, remarks on.....	lxiii, 193
Tracadie Harbour, N. S., oyster beds.	253

U

United States, list of fishing vessels calling at Canadian ports	266
" " " " <i>modus vivendi</i> licenses.....	264

V

Value of fisheries. (See also each Province.).....	xxii
Vernacular names of fishes, by Prof. E. E. Prince.....	xlvi
Verveux, hoop-net fishing	192

W

Walker, John, hatchery officer:.....	247
Wakeham, Wm., reports on Gulf Division:.....	xxxiii, 185

REPORT

OF THE

DEPUTY MINISTER.

To the Honourable

Sir LOUIS H. DAVIES, K.C.M.G., &c.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the annual report upon the transactions of the Fisheries branch of the Department of Marine and Fisheries, embracing the fiscal year ending on June 30 last. The Fisheries Protection Service, Fisheries Intelligence, Behring Sea Question and Fish Culture reports comprise the whole calendar year 1900, and the statistics, as usual, are those covering the previous year.

A general review of the state of the fisheries during the year now ending is given in the preliminary reports of the fifteen Dominion Fishery Inspectors who have charge of the various fishery divisions in the several provinces. No changes have taken place in regard to the system of fishery protection by local officers under this department in the provinces of New Brunswick, Nova Scotia, Prince Edward Island, Manitoba, the North-west Territories, District of Yukon and British Columbia; but as pointed out in last year's report, the provinces of Quebec and Ontario took over fishery protection responsibilities so far as was defined in the judgment of the Lords of the Judicial Committee of the Privy Council in London, delivered on May 26, 1898.

Three special reports are appended by Professor Prince, Commissioner of Fisheries, treating of the following subjects:—

1. Planting of Young Fry: Its comparative advantages.
2. The Vernacular Names of Fishes.
3. Acclimatization of Fish, Fresh-water and Marine.

The Commissioner also adds, as an Appendix, his usual report on the Hatcheries, and Fish Culture operations, which are under his charge.

BAIT COLD STORAGE.

Reference was made in the report of last year to the inauguration of a system of bait cold storage, and the leading features of the system were indicated; these may be summarized as follows:—

1. Formation of 'Fishermen's Bait Associations' at the various fishing centres.
2. Incorporation of the associations formed under special acts passed by the local legislatures of the maritime provinces.
3. Erection of bait freezers under the superintendence of skilled foremen provided by the department.

4. Audit of the accounts by one of the officials, and the payment of fifty per cent of the cost by the Department.
5. Practical explanation of the method of freezing and storing fish frozen for bait.
6. Provision of suitable forms for returns to be made to the department showing daily the amount of fish received and issued and the temperatures maintained.
7. Payment of the bonus of \$5 per ton for bait frozen, up to 20 tons, on the certificate of an inspector.

Public meetings have been held at a large number of places in the provinces of Nova Scotia, Prince Edward Island, New Brunswick, and at the Magdalen Islands by officers of the department, and a number of fishermen's bait associations formed. During the past fishing season three freezers were in operation at Cape George, Antigonish Co., N.S., Frog Pond, Prince Co., P.E.I. and at Alberton in the same county.

In addition to these, seven freezers have been erected at the following points:—Souris, King's Co., P.E.I., Gabarus, Cape Breton Co., C.B., Port Hood Island, Inverness Co., C.B., Whitehead and Port Beckerton, Guysborough Co., N.S., Bayfield, Antigonish Co., N.S. and Clarke's Harbour, Shelburne Co., N.S. Five freezers are under construction, viz.:—Sambro, Halifax Co., N.S., Port Maitland, Yarmouth Co., N.S., Lower East Pubnico, Yarmouth Co., N.S., Port la Tour, Shelburne Co., N.S. and Petit de Grat, Richmond, Co., C.B. Fifteen freezers are either built or building, and it is expected that five additional ones at least will be constructed. It is estimated that during the next fishing season, twenty bait freezers will be in operation around the shores of the maritime provinces, capable of storing 475 tons of frozen bait.

In addition to holding public meetings at various points a large amount of literature has been distributed, explaining the department's offer to the fishermen, and containing full instructions for the formation of fishermen's bait associations and information respecting the operation of the freezers.

The results obtained from the operations of the three bait freezers during the past fishing season were satisfactory. At Cape George the season was an exceptionally good one for fresh bait, and in consequence the fishermen did not require to use their supply of frozen herring, the presence of the freezer, however, was a guarantee that bait would be always obtainable. The past season has been a very favourable one for the fishermen of this locality. At Alberton no decisive results were obtained. The freezer was late in commencing operations, and a small charge only was frozen. At Frog Pond the results were very satisfactory and a large amount of fish valued at \$2,000 were caught which could not otherwise have been obtained. The President of this Association, Mr. A. F. Larkin, of Tignish, writes that he is 'certain that we are on the eve of a new era in the cod fishing business around our shores since the inauguration of the Fishermen's Bait Associations.'

The fishermen of the different localities visited have borne testimony to the value of the system of bait cold storage by the interest taken in the meetings and the efforts made by them to form associations. Financial considerations have prevented many localities from taking the offer up, that would otherwise have done so. Many prominent men engaged in the fishing industry have also written in support of the movement to establish a system of bait cold storage.

SESSIONAL PAPER No. 22

The legislatures of Nova Scotia and Prince Edward Island at their last session passed special Acts for the free incorporation of Fishermen's Bait Associations, and it is anticipated that similar legislation will be enacted by the legislatures of the provinces of New Brunswick and Quebec.

The special committee appointed by the legislature of Nova Scotia to consider the state of the fisheries, among other resolutions reported as follows:—

‘That your committee would also desire to impress upon the federal government their sense of the great importance of the enterprise (system of bait cold storage) conferring, as it will do, immense benefits on the fishermen by preserving fresh bait and encouraging the trade in fresh fish, which latter should attain to much greater proportions than it has hitherto done, and they would express the hope that government will continue to deal with it in the most liberal manner possible.’

Provision has been made for the erection of bait freezers varying in capacity from 10 to 50 tons and costing from \$500 to \$2,000. It has been found that the larger sized freezers are more in demand than the smaller ones; of the fifteen freezers either built or building, only two have a smaller capacity than twenty tons.

As it is expected that Canadian vessels engaged in the deep sea fisheries will utilize to some extent the chain of freezers established around the coast, and as it is desirable to explain how frozen bait may be preserved after being taken from the freezers, it is proposed to issue during the winter, plans showing how small cold storage boxes can be built enabling frozen bait to be preserved on the fishing vessels.

It is proposed to continue the work along the same lines during the winter and spring, and it is expected that a great impetus will be given to the fishing industry, at those points where Fishermen's Bait Associations have been established.

MARINE BIOLOGICAL STATION.

The Marine Biological Station vigorously continued its work during the past season, a numerous staff of distinguished scientific workers and specialists occupying the laboratory tables, and conducting fishery and technical investigations, of practical value and importance. In order to allow of the completion of certain somewhat lengthened researches, the Marine Station was not moved from its location on Passamaquoddy Bay, near St. Andrews, N.B., though the proposal to tow the building round the coast, to the Nova Scotia shore, was fully discussed at the meeting of the Board of Management held in June. The great importance of the fisheries and of complex fishery problems along the eastern shores of Nova Scotia, around the Gut of Canso, and the coast of Cape Breton, weighed with the Board in considering the proposal to have this movable station conveyed to a new temporary site. A final decision will be arrived at, at the next meeting of the Board, early in the new year.

During the summer and fall, marine investigations were carried on by Professor Macallum, of the University of Toronto, Professor A. P. Knight, of Queen's University, Kingston; Dr. Joseph Stafford, Toronto University; Professor James Fowler, of Queen's University, Kingston; Dr. R. H. Scott, Toronto University; Professor E. W. MacBride, of McGill University, Montreal; Mr. Bower, of Kingston, Ont., Dr. F. S. Jackson, McGill University, and Dr. A. H. Mackay, Superintendent of Education for Nova Scotia, Halifax, N.S. The Commissioner of Fisheries (Professor Prince) carried on

some fishery studies in the fall, besides continuing to act as Director of the institution. Each of the ten scientific specialists above named took up several subjects; and much faunistic work was done by all, the fullest and most complete lists, however, being prepared by Dr. Stafford. It is not possible in this place to specify, with any attempt at detail, the various lines of investigation taken up by the staff; but the following special researches may be mentioned:—‘Effects of Polluted Waters on Fish life,’ by Professor Knight; ‘The Clam Fishery of Passamaquoddy Bay, including the Habits, Distribution and Breeding of the Clam,’ by Dr. Stafford; ‘The Food of Sea Urchins and other Echinoderms,’ by Dr. Scott; ‘The Flora and Marine Algæ of Passamaquoddy Bay,’ by Professor Fowler; ‘The Histology and Chemical Characteristics of Medusæ,’ by Professor Macallum; and ‘The Young Stages of the Salmon with special reference to Pacific Species,’ by Professor Prince. The MS. reports, with illustrative drawings, have for the most part been already placed in the director’s hands, including, in addition to most of the reports mentioned above, a paper on ‘The effect of the Sardine Fishery on the Herring Supply in New Brunswick,’ by Dr. B. Arthur Bensley, of Columbia University, New York, formerly of Toronto University, who spent the season of 1899 at the Biological Station.

The above scientific papers will be published as a supplement to this report.

The library of the Marine Station is as yet very inadequately equipped; but mention must be made of a munificent gift from the British government, through the kind offices of the Right Hon. Lord Strathcona, High Commissioner for Canada, by which the shelves of the laboratory have been enriched with a complete set of the magnificent reports of the ‘Challenger’ Expedition. The Right Hon. Joseph Chamberlain, Secretary of State for the Colonies, communicated to the High Commissioner on Sept. 11, 1899, the intimation that the Lords Commissioners of Her Majesty’s Treasury had given directions for the transmission of a complete set of the reports of the expedition of H.M.S. ‘Challenger,’ and the 50 large volumes, which are of very great value, were available for use this season. It is worthy of special mention that through the Secretary of the Station, Professor Penhallow, the board were informed early in the season of the completion of an arrangement with Dr. C. O. Whitman, Director of the Wood’s Holl Biological Station, U.S., whereby an investigator’s table in the Canadian Marine Station is placed at the service of a nominee from Wood’s Holl, on condition that a similar privilege is given to a nominee from the Canadian Biological Station. Dr. C. O. Whitman, the Board were informed, had reserved a table at Wood’s Holl in accordance with this proposition. Such mutual international courtesies are beneficial in many desirable ways, in addition to the benefit and advantage accruing scientifically. The first two seasons of the Biological Station’s work have been in every sense most successful, and the arduous and self-denying labours of eminent scientists who have resorted to it for purposes of research cannot fail to aid in a very practical way the fisheries of the Dominion.

GENERAL STATISTICS OF FISHERIES.

EXPENDITURE AND REVENUE.

The details of the total expenditure for the different fisheries services during the last fiscal year amounting to \$411,717, form the first appendix of this report. This amount comprises the fisheries proper \$85,151, fish-culture \$38,070, fisheries protection service \$97,370. Miscellaneous expenses \$31,125, besides the \$160,000 distributed as fishing bounties.

SESSIONAL PAPER No. 22

The total amount received during the same period as revenue from fishery licenses, fines, &c., in the different provinces is given at \$88,406. This sum also includes the *modus vivendi* licenses granted to the United States fishing vessels (\$8,617).

A comparative statement of all fisheries expenditure and revenue for the last fourteen years concludes this appendix.

FISHING BOUNTIES.

During the year 1899, the deep-sea fishermen of the maritime provinces received the sum of \$160,000 as fishing bounties on the season's catch. Of this amount \$71,079 was divided amongst the owners of 789 vessels and their crews, and \$88,920 was distributed to 21,738 boat fishermen. These different amounts covered the payment of 13,628 claims. 131 claims were refused payment on account of illegalities.

For last year Nova Scotia received more than two-thirds of the bounty fund, amounting to \$106,598. The amount in Quebec was \$32,065, New Brunswick \$13,514, and Prince Edward Island \$7,822.

Since its inception (1882) the sum of \$2,841,369 has been distributed amongst the fishermen of the above mentioned provinces to substantially aid the development of their sea fisheries. See appendix No. 2, for further particulars.

EXTENT OF COAST.

The fisheries of Canada are the most extensive in the world, comprising an immense line, besides innumerable lakes and rivers. The eastern sea coast of the maritime provinces from the Bay of Fundy to the Straits of Belle Isle covers a distance of 5,600 miles, and that of British Columbia is given at 7,180 miles, or more than double that of Great Britain and Ireland.

While the salt water inshore area not including minor indentations covers more than 1,500 square miles, the fresh water area of that part of the great lakes belonging to Canada is computed at 72,700 square miles, not including the numerous lakes of Manitoba and the Territories all stocked with excellent species of food-fish.

CAPITAL INVESTED AND NUMBER OF PERSONS ENGAGED IN THE CANADIAN FISHERIES.

The following tables will show that no less than 79,863 men were last year earning their livelihood by exploiting our waters, using 5,506,760 fathoms of nets and other fishing gear representing a capital of \$10,000,000. Nearly twelve hundred schooners and tugs manned by 8,970 sailors, as well as 70,893 other fishermen, using over 38,000 boats, found occupation in this vast industry.

The lobster plant alone is estimated at \$1,334,180; comprising 858 canneries, dispersed on the sea board of the maritime provinces. No less than 18,708 persons found employment in this branch of the fishing industry, using over 1,360,000 traps.

The salmon preserving industry of British Columbia, comprising 69 canneries, and representing a capital of \$1,380,000, gives employment to 18,977 hands.

RECAPITULATION
Showing the value of Vessels, Boats, Nets, &c., as well as the number of Fishermen in Canada, 1899.

PROVINCE.	FISHERMEN IN		VESSELS.			BOATS.		GILL-NETS AND SEINES.		Value of pound and trap nets, weirs, trawls, etc.	Value of Lobster plant.	Approximate value of freezers, ice and smoke houses, and other fixtures not itemized.	Total Value.
	Vessels.	Boats.	Number.	Tonnage.	Value.	Number.	Value.	Fathoms.	Value.				
Nova Scotia.....	5,705	19,466	553	25,342	901,498	15,366	322,437	2,030,363	552,731	233,583	586,394	484,152	3,080,795
New Brunswick.....	1,131	11,843	276	3,640	118,450	6,743	265,992	974,241	640,811	297,198	367,047	492,390	2,181,888
Prince Edward Island.....	98	4,655	21	741	12,950	2,353	63,150	105,494	33,869	21,034	243,595	50,072	424,670
Quebec.....	154	13,096	29	986	18,100	7,328	189,170	333,030	193,962	104,492	137,143	196,540	839,407
Ontario.....	541	1,889	*109	1,886	238,925	1,033	70,505	1,192,271	198,604	135,266	.....	139,204	782,504
British Columbia.....	{ +800) 469 {	18,977	{ +26 153 {	+1,894 3,825	+84,500 313,550	+353 4,829	+21,050 250,350	682,734	518,823	27,050	.....	1,495,000	2,710,323
Manitoba and N.W. Territories.	72	967	*11	194	29,000	533	13,202	183,629	24,076	300	.....	63,675	130,253
Totals.....	8,970	70,893	1,178	38,508	1,716,973	38,538	1,195,856	5,506,762	2,162,876	818,923	1,334,179	2,921,033	10,149,840

NOTE.—*Mostly tugs.
†Sealing crews, whites and Indians.
‡Sealing vessels, boats and canoes.

SESSIONAL PAPER No. 22

STATEMENT of the Lobster industry in Canada, 1899.

PROVINCES.	Number of Persons Employed.	PLANT.				CATCH.					
		Number of Canneries.	Value.	Number of Traps.	Value.	Total Value of Plant.	Number of 1 lb. Cans.	Value.	Fresh or Alive.	Value.	Total Value of Catch.
			\$		\$	\$	Lbs.	\$	Cwt.	\$	\$
Nova Scotia	7,570	247	217,491	681,173	368,903	586,394	4,837,402	967,480	134,462	672,310	1,639,790
New Brunswick	5,171	216	145,550	241,002	221,497	367,047	2,177,106	435,421	19,965	99,825	535,246
Prince Edward Island	3,176	240	95,230	283,114	148,365	243,595	2,421,144	484,229	46	230	484,459
Quebec	2,791	155	52,281	159,345	84,862	137,143	1,059,658	211,932	125	625	212,557
Totals	18,708	858	510,552	1,364,634	823,627	1,334,179	10,495,310	2,099,062	154,598	772,990	2,872,052

64 VICTORIA, A. 1901

COMPARATIVE TABLE showing Number, Tonnage and Value of Vessels and Boats engaged in the Fisheries of Canada, together with the Value of Fishing Materials employed, from 1879 to 1899.

YEAR.	VESSELS.			BOATS.		Value of Nets and Seines.	Value of other Fishing Ma- terial.	Total of Capital Invested.
	No.	Tonnage.	Value.	No.	Value.			
			\$		\$	\$	\$	\$
1879	1,183	43,873	1,714,917	25,616	854,289	988,698	456,617	4,014,521
1880	1,181	45,323	1,814,688	25,266	716,352	985,978	419,564	3,936,582
1881	1,120	48,389	1,765,870	26,108	696,710	970,617	679,852	4,113,049
1882	1,140	42,845	1,749,717	26,747	833,137	1,351,193	823,938	4,757,985
1883	1,198	48,106	2,023,045	25,825	783,186	1,243,366	1,070,930	5,120,527
1884	1,182	42,747	1,866,711	24,287	741,727	1,191,579	1,224,646	5,014,663
1885	1,177	48,728	2,021,633	28,472	852,257	1,219,284	2,604,285	6,697,459
1886	1,133	44,605	1,890,411	28,187	850,545	1,263,152	2,720,187	6,814,295
1887	1,168	44,845	1,989,840	28,092	875,316	1,499,328	2,384,356	6,748,840
1888	1,137	33,247	2,017,558	27,384	859,953	1,594,992	2,390,502	6,863,005
1889	1,100	44,936	2,064,918	29,555	965,010	1,591,085	2,149,138	6,770,151
1890	1,069	43,084	2,152,790	29,803	924,346	1,695,358	2,600,147	7,372,641
1891	1,027	39,377	2,125,355	30,438	1,007,815	1,644,892	2,598,124	7,376,186
1892	988	37,205	2,112,875	30,513	1,041,972	1,475,043	3,017,945	7,647,835
1893.....	1,104	40,096	2,246,373	31,508	955,109	1,637,707	3,174,404	8,681,557
1894	1,178	41,768	2,409,029	34,102	1,009,189	1,921,352	4,099,546	9,439,116
1895	1,121	37,829	2,318,290	34,268	1,014,057	1,713,190	4,208,311	9,253,848
1896	1,217	42,447	2,041,130	35,398	1,110,920	2,146,934	4,527,267	9,826,251
1897	1,184	40,679	1,701,239	37,693	1,128,682	1,955,304	4,585,569	9,370,794
1898	1,154	38,011	1,707,180	38,675	1,136,943	2,075,928	4,940,046	9,860,097
1899	1,178	38,508	1,716,973	38,538	1,195,856	2,162,876	5,071,135	10,149,840

SESSIONAL PAPER No. 22

COMPARATIVE TABLE showing the number of men employed in the Fishing Industry since 1879.

Years.	Number of Persons in Lobster Canneries.	Number of Men in Vessels.	Number of Men in Boats.	Total Number of Fishermen.	Total Number of Persons in Fishing Industry.
1879.....		8,818	52,577	61,395	
1880.....		8,757	51,900	60,657	
1881.....		8,359	50,679	59,056	
1882.....		8,498	52,785	61,283	
1883.....		9,966	52,259	62,225	
1884.....		9,968	51,854	61,822	
1885.....		9,539	53,282	62,821	
1886.....		8,927	53,073	62,000	
1887.....		8,911	55,247	64,158	
1888.....		9,574	53,109	62,683	
1889.....		9,621	55,382	65,003	
1890.....		8,726	55,000	63,726	
1891.....		8,666	56,909	65,575	
1892.....		8,330	55,348	63,678	
1893.....		8,899	58,854	67,753	
1894.....		9,525	61,194	70,719	
1895.....	13,030	9,804	61,530	71,334	84,364
1896.....	14,175	9,735	65,502	75,237	89,412
1897.....	15,165	8,879	70,080	78,959	94,124
1898.....	16,548	8,657	72,877	81,534	98,082
1899.....	18,708	8,970	70,893	79,893	98,601

VALUE OF THE FISHERIES.

The total value of the catch of fish in Canada for the year 1899 amounts to \$21,891,706, being an increase of about *two and a quarter million dollars* over the yield of the preceding year. This amount is subdivided by provinces as follows :—

Provinces.	Value.	Increase.
	\$ cts.	\$ cts.
Nova Scotia.....	7,347,604 00	121,569 00
British Columbia.....	5,214,074 00	1,500,972 00
New Brunswick.....	4,119,891 00	270,533 00
Quebec.....	1,953,134 00	191,694 00
Ontario.....	1,590,447 00	156,815 00
Prince Edward Island.....	1,043,645 00	
Manitoba and North-west Territories.....	622,911 00	9,556 00

As will be noticed, there is an increase in almost every province, and British Columbia, which the previous year showed a decline of nearly two and a half million dollars, exhibits the highest surplus, amounting to over one and a half million dollars, due almost solely to the salmon industry in the province which fluctuates from year to year. New Brunswick, Quebec, Ontario and Nova Scotia also largely contributed to the above mentioned total increase.

The features of the various fisheries are fully explained by the different inspectors, in their respective reports, forming the appendices three to ten of this report.

The figures given above do not include the enormous quantity of fish consumed by the Indians of British Columbia, the Yukon district, and remoter parts of the North-west Territories, where fish form the staple food.

The following statement shows the relative values of the principal kinds of commercial fishes (above \$100,000) for the year 1899, as compared with those of the previous year :—

Kinds of Fish.	Value.	Increase.	Decrease.
	\$ cts.	\$ cts.	\$ cts.
Salmon.....	4,534,020 00	1,374,714 00	
Cod.....	3,754,973 00	758,390 00	
Lobsters.....	2,872,052 00		1,015,887 00
Herring.....	2,164,050 00	176,596 00	
Trout.....	874,530 00	180,704 00	
Mackerel.....	801,694 00	107,103 00	
Haddock.....	686,611 00	5,054 00	
Whitefish.....	653,162 00	30,989 00	
Hake.....	595,806 00	204,256 00	
Sardines.....	509,270 00	80,248 00	
Smelts.....	441,663 00	21,521 00	
Halibut.....	275,210 00		16,066 00
Pickarel.....	274,694 00	38,699 00	
Pollock.....	243,086 00	98,378 00	
Oysters.....	162,052 00		54,972 00
Pike.....	160,314 00	64,800 00	
Sturgeon.....	137,690 00		61,470 00
Alewives.....	135,308 00		24,116 00
Tom cod.....	123,133 00	20,707 00	
Eels.....	109,580 00		9,040 00
Shad.....	107,752 00		261 00

SESSIONAL PAPER No. 22

The quantity of fish used as bait is valued at \$401,809, that of fish oil at \$235,042, while the fur seal skins of British Columbia have realized \$441,825.

A glance at the above table will show that out of twenty one species valued at over \$100,000, fourteen have increased while seven have declined when compared with the previous yield. A most important fact to note is the \$1,374,714 reported in excess of the value of British Columbia *salmon pack*, of 1898, which was very much below that of the year before. Over thirty-six millions cans of salmon were preserved in that province in 1899 as against twenty-three millions in 1898.

Cod, which has advanced a step, now occupies second place on the honour roll of these returns. The improvement over the previous year's take valued at three-quarters of a million dollars, applies to every province, but Nova Scotia can boast of the largest share, with 186,000 cwt. surplus over the catch of 1898.

Other fluctuations worth mentioning are the increases to be noted in hake, trout, herring and mackerel.

While the sardine canning establishments of Charlotte County did not put up as large a pack as in the previous season, the quantity caught in the weirs and sold to the Maine canneries shows an increase of over forty-five thousand barrels.

From the year 1869 to 1899 inclusive, the five principal commercial fishes have yielded the following enormous total values :—

Cod	\$117,523,126
Herring	60,664,916
Lobsters	59,210,127
Salmon	59,103,171
Mackerel	39,683,427

EXPORT OF FISH.

During the last fiscal year the value of fish exported from Canada to foreign countries is given as follows :—

Nova Scotia	\$5,007,798
British Columbia	3,443,037
New Brunswick	731,392
Prince Edward Island	590,152
Ontario	548,823
Quebec	541,376
Manitoba and North-west Territories	306,505
	<hr/>
	\$11,169,083

Details of these exports will be found in the Customs Department's reports, 1900.

64 VICTORIA, A. 1901

STATEMENT of the production of each Branch of the Fisheries

No.	KINDS OF FISH.	NOVA SCOTIA.		NEW BRUNSWICK.		BRITISH
		Quantity.	Value.	Quantity.	Value.	Quantity.
			\$		\$	
1	Cod, dried Cwt.	629,810	2,519,240	87,230	348,920	5,375
	" tongues and sounds Brls.	1,136	11,360	140	1,400	
2	Haddock, dried Cwt.	126,355	379,065	6,975	20,925	
	" fresh Lbs.	3,582,102	107,463	781,000	23,430	
	" smoked (finnan haddies) Lbs.	1,353,966	81,238	1,080,050	65,763	
3	Hake, dried Cwt.	196,693	442,559	28,702	64,580	
	" sounds Lbs.	53,775	26,888	20,191	10,095	
4	Pollock Cwt.	98,503	197,006	23,040	46,080	
5	Tom cod or frost fish Lbs.	199,655	9,983	1,713,600	85,680	
6	Halibut Lbs.	1,473,162	147,316	72,400	7,240	2,075,000
7	Flounders Lbs.	593,890	29,695	125,400	6,270	
	Salmon, preserved in cans Lbs.	4,787	718	8,200	1,230	36,443,912
	" fresh Lbs.	387,087	77,417	1,246,510	249,302	1,873,550
8	" smoked Lbs.	6,252	1,250	400	80	211,500
	" pickled Brls.	1,015	15,225			3,450
	" dry salted Lbs.					3,000,000
9	Trout Lbs.	104,812	10,481	188,800	18,880	328,800
10	Ouananiche Lbs.					
11	Whitefish Lbs.					
12	Smelts Lbs.	376,060	18,803	7,033,800	351,690	74,000
13	Oulachans (in B.C.) Lbs.					1,077,000
	Herring, salted Brls.	80,632	322,528	194,546	778,184	
14	" fresh Lbs.	3,973,151	39,732	20,396,000	203,960	625,000
	" smoked Lbs.	557,050	11,141	8,885,775	177,716	187,000
	" kippered Lbs.				36,120	
15	Sardines, preserved Cans.			1,261,000	63,050	
	" Brls.			217,921	433,842	
16	Shad Brls.	3,647	36,470	6,598	65,985	22
17	Alewives Brls.	11,807	47,228	20,614	82,456	
18	Pike Lbs.					
19	Maskinongé Lbs.					
20	Eels, salted Brls.	2,237	22,370	2,288	22,880	
	" fresh Lbs.					
21	Perch Lbs.			25,000	1,250	
22	Pickrel Lbs.			158,000	7,900	
23	Bass Lbs.	11,960	1,191	337,400	33,740	
24	Mackerel, salted Brls.	13,454	201,810	40	600	
	" fresh Lbs.	3,692,117	443,054	325,450	39,054	
25	Sturgeon Lbs.			12,000	840	278,650
	" caviare Lbs.			490	245	4,000
26	Lobsters, canned Lbs.	4,837,402	967,480	2,177,106	435,421	
	" fresh or alive Cwt.	134,462	672,310	19,965	99,825	
27	Oysters Brls.	2,027	8,108	17,250	69,000	
28	Clams Brls.	2,454	8,180		45,631	
29	Squid Brls.	12,762	51,048	178	712	
30	Coarse and mixed fish Brls.	64,009	128,018	4,750	9,500	110
	" " Lbs.			102,450	8,373	
31	Home consumption (not included above)					
32	Fur seal skins (in B.C.) No.					35,346
33	Hair " No.	8	10	65	106	7,600
34	Belugas (white whales) No.					
35	Fish oil Galls.	401,828	120,549	55,730	16,719	145,200
36	Fish as bait Brls.	99,058	148,587	86,195	137,692	
37	Fish as manure and guano Brls.	84,166	42,083	95,050	47,525	55,000
	Totals		7,347,604		4,119,891	

SESSIONAL PAPER No. 22

in the different Provinces of Canada for the Year 1899.

COLUMBIA.	QUEBEC.		ONTARIO.		P. E. ISLAND.		MANITOBA AND N.-W. TERRITORIES.		No.
Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
\$		\$		\$		\$		\$	
26,875	183,720	737,500			26,422	105,688			1
	238	2,380			161	1,610			
	1,360	4,080			980	2,940			2
	53,510	1,605			3,000	90			
					200	12			3
	180	405			14,687	33,046			
					36,466	18,233			4
	1,216,700	25,735			34,700	1,735			5
103,750	165,343	16,534			3,700	370			6
									7
3,644,391									8
187,355	885,810	177,162							
21,150					8,000	1,600			9
34,500	176	2,640							
120,000									10
32,880	550,724	55,072	7,578,120	747,832	51,350	5,135	85,000	4,250	
	98,000	5,800							11
	87,668	7,013	3,313,990	264,663			7,622,520	381,486	12
3,700	406,700	20,335			942,700	47,135			13
55,200									14
	39,837	159,348	647	2,590	34,797	139,188			
18,750	8,944,450	89,445	8,155,910	163,118	134,800	1,348			15
18,700	108,500	2,170			600	12			
									16
	4,126	12,378							
225	440	5,072							17
					1,406	5,624			
	327,405	13,098	1,849,774	73,991			3,661,258	73,225	18
	90,420	5,425	304,599	18,276					19
	301	3,010			794	7,940			20
	848,920	50,935	40,745	2,445					
	255,430	7,663	681,165	20,435			72,513	1,435	21
	371,110	18,555	3,580,126	179,006			2,307,758	69,233	22
	148,545	11,884	300,579	24,046	100	10			23
	5,391	80,865			2,260	33,900			24
					20,092	2,411			
13,933	483,057	28,983	755,932	45,356			559,787	32,437	25
1,600			21,414	6,424			15,745	7,872	
	1,059,658	211,932			2,421,144	484,229			26
	125	625			46	230			
12,000					18,236	72,944			27
9,080					335	1,340			28
	5,032	20,128			686	2,744			29
1,100	160	320			1,400	3,625			30
51,300	3,322,275	36,290	2,043,867	42,265			4,102,582	47,248	
350,000							572,500	5,725	31
441,825									32
5,700	4,180	5,225			10	20			33
	227	908							34
43,560	161,782	48,535			18,932	5,679			35
	39,042	58,563			37,978	56,967			36
16,500	50,871	25,436			7,840	7,840			37
5,214,074		1,953,134		1,590,447		1,043,645		622,911	

RECAPITULATION

Of the Yield and Value of the Fisheries in the Dominion of Canada for the Year, 1899.

No.	Kinds of Fish.	Quantity.	Value.	Total Value.
			\$	\$
1	Cod, dried..... Cwt.	932,557	3,738,223	
	" tongues and sounds..... Brls.	1,675	16,750	3,754,973
2	Haddock, dried..... Cwt.	135,670	407,010	
	" fresh..... Lbs.	4,419,612	132,588	
	" smoked finnan haddies..... "	2,434,216	147,013	686,611
3	Hake, dried..... Cwt.	240,262	540,590	
	" sounds..... Lbs.	110,432	55,216	595,806
4	Pollock..... Cwt.	121,543		243,086
5	Tom cod or frost fish..... Lbs.	3,164,655		123,133
6	Halibut..... "	3,789,605		275,210
7	Flounders..... "	719,290		35,965
	Salmon, preserved in cans..... "	36,456,899	3,646,339	
	" fresh..... "	4,391,957	691,236	
8	" smoked..... "	226,152	24,080	
	" pickled..... Brls.	4,641	52,365	
	" dry salted..... Lbs.	3,000,000	120,000	4,534,020
9	Trout..... Lbs.	8,887,606		874,530
10	Ouananiche..... "	98,000		5,880
11	Whitefish..... "	11,024,178		653,162
12	Smelts..... "	8,833,260		441,663
13	Oulachans (in B.C.)..... "	1,077,000		55,200
	Herring, salted..... Brls.	350,459	1,401,838	
14	" fresh..... Lbs.	42,229,311	516,353	
	" smoked..... "	9,738,925	209,739	
	" kippered..... "		36,120	2,164,050
15	Sardine, preserved..... Cans.	1,261,000	63,050	
	"..... Brls.	222,047	446,220	509,270
16	Shad..... Brls.	10,707		107,752
17	Alewives..... "	33,827		135,308
18	Pike..... Lbs.	5,838,437		160,314
19	Maskinonge..... "	395,019		23,701
20	Eels, salted..... Brls.	5,620	56,200	
	" fresh..... Lbs.	889,665	53,380	109,580
21	Perch..... "	1,034,108		30,783
22	Pickrel..... "	6,416,994		274,694
23	Bass, sea (striped)..... "	349,460	34,941	
	" black, (achigan)..... "	449,124	35,930	70,871
24	Mackerel, salted..... Brls.	21,145	317,175	
	" fresh..... Lbs.	4,037,659	484,519	801,694
25	Sturgeon..... "	2,089,426	121,549	
	" caviare..... "	41,649	16,141	137,690
26	Lobsters, preserved in Cans..... "	10,495,310	2,099,062	2,872,052
	" fresh or alive..... Cwt.	154,598	772,990	
27	Oysters..... Brls.	40,513		162,052
28	Clams..... "			64,231
29	Squid..... "	18,658		74,632
30	Coarse and mixed fish..... "	70,429	142,563	
	"..... Lbs.	10,597,174	185,476	328,039
31	Home consumption..... "			355,725
32	Fur seal skins (in B.C.)..... No.	35,346		441,825
33	Hair..... "	11,863		11,061
34	Beluga or (white whale)..... "	227		908
35	Fish-oil..... Galls.	783,472		235,042
36	Fish as bait..... Brls.	262,273		401,809
37	Fish as manure and guano..... "	292,927		139,384
	Total for 1899.....			21,891,706
	" 1898.....			19,667,121
	Increase.....			2,224,585

RECAPITULATION.

Showing the Total Value of the Fisheries in the respective Provinces of Canada, from 1870 to 1899, inclusive, as compiled from the Annual Reports of the Department of Fisheries.

Year.	Nova Scotia.	New Brunswick.	Prince Edward Island.	Quebec.	Ontario.	British Columbia.	Manitoba and North-west Territories.	Total for Canada.
1870.....	\$ 4,019,425	\$ 1,131,433	No data.	\$ 1,161,551	\$ 264,982	No data.	\$ No data.	\$ 6,577,391
1871.....	5,101,030	1,185,033	"	1,093,612	193,524	"	"	7,573,199
1872.....	6,016,835	1,965,459	"	1,320,189	267,633	"	"	9,570,116
1873.....	6,577,085	2,285,662	207,595	1,391,564	293,091	"	"	10,754,997
1874.....	6,652,302	2,685,794	288,863	1,603,660	446,267	"	"	11,681,886
1875.....	5,573,851	2,427,654	298,927	1,596,759	453,194	"	"	10,350,385
1876.....	6,029,050	1,953,389	494,967	2,097,668	437,229	104,697	"	11,117,000
1877.....	5,527,858	2,133,237	763,036	2,560,147	438,223	583,433	"	12,005,934
1878.....	6,131,600	2,305,790	840,344	2,664,055	348,122	925,767	"	13,295,678
1879.....	5,752,937	2,554,722	1,402,301	2,820,395	367,133	631,766	"	13,529,254
1880.....	6,201,061	2,744,477	1,675,089	2,631,556	444,491	713,335	"	14,499,979
1881.....	6,214,782	2,930,904	1,955,290	2,751,962	509,903	1,454,321	"	15,817,162
1882.....	7,131,418	3,192,339	1,855,687	1,976,516	825,457	1,842,675	"	16,824,092
1883.....	7,689,374	3,185,674	1,272,468	2,138,997	1,027,033	1,644,646	"	16,958,192
1884.....	8,763,779	3,730,454	1,085,619	1,694,561	1,133,724	1,358,267	"	17,766,404
1885.....	8,283,922	4,005,431	1,293,430	1,719,460	1,342,692	1,078,038	"	17,722,973
1886.....	8,415,362	4,180,227	1,141,991	1,741,382	1,435,998	1,577,348	186,980	18,679,288
1887.....	8,379,782	3,559,507	1,037,426	1,773,567	1,531,850	1,974,887	129,084	18,386,103
1888.....	7,817,030	2,941,863	876,862	1,860,012	1,839,869	1,902,195	180,677	17,418,510
1889.....	6,346,722	3,067,039	886,430	1,876,194	1,963,123	3,348,067	167,679	17,655,256
1890.....	6,636,444	2,699,055	1,041,109	1,615,119	2,009,637	3,481,432	232,104	17,714,902
1891.....	7,011,300	3,571,050	1,238,733	2,008,678	1,806,389	3,008,755	332,969	18,977,878
1892.....	6,340,724	3,203,922	1,179,856	2,236,732	2,042,198	2,849,483	1,088,254	18,941,171
1893.....	6,407,279	3,746,121	1,133,368	2,218,905	1,694,430	4,443,963	1,042,093	20,686,661
1894.....	6,547,387	4,351,526	1,119,738	2,303,386	1,659,968	3,950,478	787,087	20,719,573
1895.....	6,213,131	4,403,158	976,836	1,867,920	1,584,473	4,401,354	752,466	20,199,338
1896.....	6,070,895	4,799,433	976,126	2,025,754	1,605,674	4,183,999	745,543	20,407,425
1897.....	8,090,346	3,934,135	954,949	1,737,011	1,289,922	6,138,865	638,416	22,783,546
1898.....	7,226,034	3,849,357	1,070,202	1,761,440	1,433,632	3,713,101	613,355	19,667,121
1899.....	7,347,604	4,119,891	1,043,645	1,953,134	1,590,447	5,214,074	622,911	21,891,706
Totals.....	200,606,351	92,843,706	28,110,887	58,306,886	32,280,708	60,524,946	7,519,528	480,089,028

FISH CULTURE.

The Fish Culture report for the year 1900, by Professor E. E. Prince, Commissioner of Fisheries, will be found in Appendix 11 of this publication. It includes a complete description of the various fish breeding operations, such as the capture of parent fish, collection of eggs, &c., at the different hatcheries by their respective officers in charge.

During the year no less than 265,996,000 fry were hatched and distributed in Canadian waters, nearly half of which were lobsters, the balance consisting of salmon, great lake trout and whitefish.

For the second time a quantity of rainbow trout have been procured and hatched in a Dominion establishment, viz., Bedford Hatchery, N.S. This Pacific species is reported to reach a large size, to be of superior edible qualities, and is a fine game fish, so that its introduction into Nova Scotia waters, with the co-operation of the Nova Scotia Game and Fish Society is a matter of unusual interest.

Reference is made in the Commissionner's report (Appendix 11) to the erection of new hatcheries in Inverness County, Cape Breton ; Gaspé, P.Q., and Shuswap Lake, near famous spawning grounds of the Fraser River salmon, commonly called Sockeye or Blue-back salmon. A quantity of eggs of Rainbow trout were procured as in the previous season, and part of them were shipped, with 10,000 land-locked salmon eggs to Glencoe, in Scotland, at the request of the Right Hon. Lord Strathcona. They arrived safely and were planted in the Glencoe waters. A reserve or inclosed sheet of water has been secured by the department as a black bass breeding ground near Belleville, the parent fish being from the Bay of Quinte, long famous as a black bass resort, but during recent years considerably deteriorated. It is anticipated that the department will have a supply of young black bass from this breeding reserve.

Unfortunately the request of the New Zealand government this year for a shipment of B.C. salmon eggs, same as sent before, could not be acceded to. All the arrangements were made, but the supply of ova this fall (1900) was seriously short.

Most of the hatcheries had a successful season of work, indeed much above the average, as Professor Prince points out in his report. Thus the work of fish culture has not only been carried on during the year with undiminished activity and success, but steps have been taken to extend the operations and to vastly increase the benefits which it is admitted accrues from the government fish-breeding operations.

OYSTER CULTURE.

A full report of last season's work on the culture of oysters by the department's expert, Mr. Ernest Kemp, follows the fish culture report of which it forms an annex.

FISHERIES PROTECTION SERVICE.

The report of the operations of the Fisheries Protection Service during the season of 1900, by Commander O. G. V. Spain, forms Appendix 12 of this publication. It is pleasing to note that this service has again been carried on without accidents and in a very satisfactory manner.

The fleet of cruisers consisted of the same ships as last year, with the addition of the steamer *Brant*, viz., the *Acadia*, *La Canadienne*, *Curlew*, *Osprey*, *Kingfisher*, *Constance*,

SESSIONAL PAPER No. 22

Aberdeen and *Petrel*. The latter cruising in the Ontario Great Lakes, and the others in the Gulf of St. Lawrence and off the Atlantic coast. The *Quadra* is also partly employed for the protection of our fisheries on the British Columbia coast.

The number of United States fishing vessels taking advantage of the *modus vivendi* licenses was 78.

A glance at the long list of foreign fishing schooners calling on our ports shows of what importance these harbours are to their fishing fleet.

The officers of the cruisers devoted a good deal of time to the protection of the lobster industry, and many thousand traps found fishing during the close time were seized and destroyed.

FISHERIES INTELLIGENCE BUREAU.

A full report of this branch of the service, which also comes under the charge of the Commander of the Protection Service, by Mr. A. D. McKarrow, clerk in charge, forms an annex to Appendix 12.

Daily compilations of the reports of 55 stations now dispersed on our Atlantic coast, are sent to Halifax and then telegraphed to the principal fishing localities of the province.

THE BEHRING SEA QUESTION AND PELAGIC SEALING.

The diplomatic or international status of this question remains unchanged, it being, as explained in the Report for 1899, page XXXI : one of those included in the scope of the Joint High Commission for the consideration of the differences between Canada and the United States.

The prosecution of the pelagic sealing industry by Canadians therefore still continues under the provisions of the Paris Award Regulations, applied to British sealers by Imperial legislation,—the ‘Behring Sea Award Act, 1894,’ 57 Victoria, Chapter 2.

Intimation was given in March that the United States government had detailed the revenue steamers *Bear*, *McCulloch*, *Manning* and *Perry* to cruise in the waters of the North Pacific Ocean and Behring Sea, during the season of 1900, with a view to the proper enforcement of the regulations of the Paris Tribunal of Arbitration for the protection and preservation of fur seals.

The vessels employed for similar patrol service by the British government were the same as the previous year, viz.: H.M. ships *Icarus* and *Pheasant*.

The sealing fleet this year numbered thirty-seven vessels, being an increase of eleven over last year—and representing an aggregate of 2,641 tons register.

Of these thirty-seven vessels, thirty-three were engaged in what is known as the coast fishery, i. e., the coast of the Pacific from the southern sealing limit to Alaska, and these thirty-three and three others, in all thirty-six, operated in Behring Sea, after the expiration of the close season, which covers May, June and July.

One schooner, the *Minnie*, although employed in the coast fishery, did not participate in the Behring Sea fishery, and two others appear to have worked in Asiatic waters, as well as in the coast and Behring Sea ventures.

64 VICTORIA, A. 1901

The crews of these vessels comprised 386 white men and 646 Indian hunters, employing 114 boats and 316 canoes.

The total number of fur-seal skins taken by Canadian sealers during 1900 was 35,523. Of these the vessels took 34,159, and the coast Indian canoe catch was 1,364 skins. This result is larger by 177 skins than that of the previous year, which in its turn largely exceeded the catches of 1898 and 1897.

The coast catch was 16,438 against 10,471 skins last year; the Behring Sea catch 17,513, against 23,284; the Asiatic catch 208, against 699; and the Indian catch 1,364, against 892.

Although the total catch of 1900 is slightly in excess of that of 1899, the average catch per vessel shows a falling off, if the comparison were confined to these two specific years. For the purpose of convenience and reference, it might be well to here reproduce a short table of averages for eleven years, published in the last departmental report adding to it the figures for the season just closed:—

Year.	Vessels.	Catch.	Averages per vessel.
1889.....	23	29,570	1,285
1890.....	29	39,351	1,357
1891.....	51	50,437	989
1892.....	65	46,362	713
1893.....	55	67,797	1,233
1894.....	59	90,485	1,533
1895.....	61	66,962	1,097
1896.....	64	53,324	833
1897.....	41	29,392	717
1898.....	35	27,452	784
1899.....	26	34,454	1,325
1900.....	37	34,159	924

The decrease in the average catch per vessel is more apparent than real. If the figures for the past seven years are examined, it will be observed that the average catch for 1899 (1,325 skins), was abnormal, while that for 1894 (1,533 skins), largely exceeded any catch in the history of the industry; yet the average per vessel for this year is 924, against an average of 902 for the seven years—1894 to 1900.

These years are particularly apposite, because they represent the full term of the application of the Paris Award regulations; they comprise the seven last consecutive years of the industry; and also include these two abnormal averages. When it is further considered that more than half the extraordinary catch of 1894 was secured off the coast of Japan, there are reasonable indications of a not unhealthy condition of the pelagic sealing business in the North American waters of the Pacific.

The quality of the seal skins obtained this year is reported to be very good, and the prices favourable, although the competition for Indian hunters was keen, and the pay or remuneration consequently high.

The vessels cleared from Victoria in January and February, proceeding along the Oregon and California coasts to about seventy-five miles south of San Francisco. Returning, they follow the seals northward, and the majority arrive at Victoria about the

SESSIONAL PAPER No. 22

end of May, or the first week in June, thus ending the spring, or coast fishery. Those having Indian hunters went to the west coast of Vancouver Island to the native villages.

For the Behring Sea branch of the business, all the vessels had sailed before the first of July.

There is a slight increase in the number of branded seals captured, and the operation of branding appears to be continued on the islands by the United States authorities, although the department has no definite information on this point for the past season. So far as the sealing statistics show, it appears that branded seals were observed in the pelagic catch for the first time in 1898, when six skins so treated were taken, out of a total catch of 28,000 seals. During the following year, 1899, the returns revealed that the number of seals taken showing evidence of branding, had increased to sixteen, which number had been found among an aggregate catch of over 35,000 seals, only eleven vessels out of twenty-six securing a branded seal.

During the season of 1900, forty-five branded skins are among the catch, having been taken by twenty-one vessels, out of thirty-seven engaged in sealing. One vessel took six out of 1,362 skins, one took five out of 1,081, one took four out of 1,416, the others ranging from three to one each.

So far as can be learned, there have been no complaints of transgressions of the law or regulations by the sealers this year; nor have any complications arisen by the application of the law affecting the business.

The only disaster reported, is the wreck of the schooner *Minnie* of Victoria which vessel struck on the rocks of Ugamok Island, on the evening of July 26, and became a total loss. She had a crew of seven white men and thirteen Indians, all of whom were taken on the schooner *Walter L. Rich*, which vessel proceeded on the sealing voyage into Behring sea.

It is said that several Japanese schooners, managed and sailed by sealers formerly in the business on the British Columbia coast, had been very successful this year on the Japan coast, and it is expected that this will act as an incentive to the Canadian sealers to resume to some extent their operations off that coast.

From 1892 to 1896 inclusive, the business was pursued by Canadians with much success off the Japanese coast; but in 1897 the number of vessels visiting that locality fell to eleven, and the following year, 1898, only one vessel crossed the ocean to that coast, while for the past two years, no Canadian vessels have exploited those waters.

The vessels crossing to the Japan side cannot of course participate in the North American coast fisheries, and any increase in the number visiting the waters in the vicinity of Japan, means a corresponding withdrawal from, or decrease in the fleet operating on our coasts. This natural condition should afford an automatic protection of these two branches of pelagic sealing from undue prosecution, should they both prove remunerative.

In past years the sealers have attempted to form some kind of association, by which means the competition for skilled hunters would be lessened, and the industry pursued under better management, and on a more economical basis.

Up to the present season they met with but indifferent success in this direction ; but they recently formed themselves into a joint stock company, under the name of ‘The Victoria Sealing Company, Limited.’

This company is said to have acquired the whole of the British Columbia fleet at present participating in the pelagic sealing industry, with the exception of two or three schooners, which it is expected will join the company before the approaching sealing season begins.

ARBITRATION OF SEIZURES OF SEALING VESSELS BY RUSSIA IN 1892.

Although considerable diplomatic correspondence has passed between Her Majesty’s government, the Russian government and that of Canada, in connection with the negotiation of the terms of reference of the claims to the arbitrator, the text of the note to be exchanged between Great Britain and Russia, has not yet been agreed to.

It has been announced in the press of St. Petersburg, that the contract with the Russian Company, who for the past ten years has had the lease of the hunting rights on the Russian seal islands, expires in February next, and that a new contract for a period of ten years would shortly be considered ; all tenderers, however, must be Russian subjects, or members of Russian firms.

THE STAFF.

The outside staff of fishing officers connected with this department during the year ending 31st December, 1900, aggregate, 836 men, including the crews of the fisheries protection fleet.

These officers were dispersed by provinces as follows :

Ontario	3
Quebec	11
Nova Scotia.....	59
New Brunswick.....	29
Prince Edward Island.....	5
Manitoba	5
North-west Territories.....	7
British Columbia.....	9
Fishery guardiams employed in 1900.....	290
Officers and crews of the Fisheries Protection Vessels.....	418
<hr/>	
Total	836

SESSIONAL PAPER No. 22

The following are inspectors of fisheries in the different provinces of the Dominion :

Name.	P. O. Address.	Extent of Jurisdiction.
Bertram, A. C	North Sydney, N.S..	District No. 1.—Cape Breton Island.
Hockin, Robt.....	Pictou, N.S.....	District No. 2.—Cumberland, Colchester, Pictou, Antigonish, Guysboro, Halifax and Hants counties.
Ford, L. S.....	Milton, N.S.....	District No. 3.—Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's counties.
Pratt, J. H., Capt.....	St. Andrews, N.B...	District No. 1.—The county of Charlotte.
Chapman, Robt. A....	Moncton, N.B....	District No. 2.—Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties.
Miles, H. S.....	Oromocto, N.B.....	District No. 3.—St. John, King's, Queen's, Sunbury, York, Carleton and Victoria counties.
Matheson, J. A.....	Campbellton, P.E.I.	Prince Edward Island.
Wakeham, Wm., M.D ..	Gaspé Basin, Que. ..	Lower St. Lawrence River and Gulf.
Lavoie, N., M.D	L'Islet, Q.	That portion of Quebec, south of River St. Lawrence and north and east of and including county of Bellechasse.
Belliveau, A. H	Ottawa.....	Province of Quebec, north of River St. Lawrence and west from and including River Saguenay, and the portion south of River St. Lawrence which lies west and south of the county of Bellechasse.
Cunningham, F. H.....	Ottawa.....	That portion of Ontario east of the western boundary line of the counties of Durham, Victoria and Haliburton including Lake Scugog and the eastern boundary of Muskoka and Parry Sound districts.
Sheppard, O. B.	Toronto, Ont.	That part of the province of Ontario, west of the eastern boundaries of the county of Ontario, and the districts of Muskoka and Parry Sound along the Mattawa and Ottawa Rivers and northward along the north eastern boundary line of said province to James Bay.
Duncan, A. G	Marksville, Ont.....	That portion of Ontario lying west and north of Lake Nipissing, the Rivers Mattawa and Ottawa and the north-east boundary line of the province to James Bay, embracing Nipissing, Algoma, Thunder Bay and Rainy River districts, Lake Superior and such portions of Lake Huron and Georgian Bay as lie adjacent or opposite to the part of Ontario above described.
Colcleugh, F. W.....	Selkirk, Man	Province of Manitoba.
Miller, E. W	Qu'Appelle, N.W.T.	All the North-west Territories.
Stewart, Theophilus....	Dawson City..	Yukon District, N. W. Territories.
Sword, C. B	N. Westminster, B.C.	Province of British Columbia.

The following are the officers in charge of the Government Fish Hatcheries :

Name.	Rank.	P. O. Address.
Armstrong, Wm	Officer in charge of Government Fish Hatchery.....	Newcastle, Ont.
Parker, Wm.....	"	Sandwich, Ont.
Walker, John.....	"	Ottawa, Ont.
Finlayson, Alex.....	Asst. officer in charge of Government Fish Hatchery..	Magog, Que.
Catellier, L. N.....	Officer in charge of Government Fish Hatchery.....	Tadoussac, Que.
Mowat, Alex	"	Campbellton, N.B.
McCluskey, Chas	"	Grand Falls, N.B.
Sheasgreen, Isaac..	"	South Esk, Miramichi, N.B.
Ogden, A.....	"	Bedford Basin, N.S.
"	Government Lobster Hatchery....	Pictou, N.S.
Sword, C. B.....	Officer in charge of Government Fish Hatchery.....	New Westminister, B.C.
Colcleugh, F. W.....	"	Selkirk, Man.
Kemp, Ernest	Oyster culture.....	Ottawa, Ont.

PRELIMINARY REPORTS ON THE FISHING SEASON OF 1900.

A glance at the preliminary reports (herewith appended) received from our different inspectors in their respective provinces or districts, on the general aspects of the fishing operations for the season of 1900, now closing, indicates a falling off in the aggregate value of the fish catch as compared with that of 1899, as detailed in this report.

The salmon canning industry of British Columbia alone will be responsible for a million dollars decrease. Considerable diminutions are also expected from the Cape Breton and Bay of Fundy districts, where the herring and sardine fishermen have fared badly. Another disadvantage was the extraordinary storms prevailing during the autumn, which not only destroyed numerous fishing vessels and much gear, but brought bereavement to many humble homes. The drowning, off the coast of Prince Edward Island, of forty-seven fishermen all from Gloucester County, N.B., on September 13, was certainly one of the worst catastrophes recorded in our fishery reports in one year.

Notwithstanding these circumstances, it is safe to estimate the value of the present year's fisheries yield at over twenty million dollars.

NOVA SCOTIA.

Inspector A. C. Bertram, of North Sydney, sends the following preliminary report on the fisheries of Cape Breton. The fishing season not being ended yet, the statistics for 1900 have not all been gathered; however, they will exhibit a decrease in the catch of fish as compared to those of 1899. This is to be accounted for by the fact that the great development in mining, in railroad construction, and also in the building of the mammoth iron and steel plant now under way on Sydney Harbour, have taken from the fishing districts hundreds of men who would have otherwise been engaged in fishing. Not only have our own fishermen been able to secure employment at good wages at the works referred to, but more than three thousand fishermen from the Colony of Newfoundland have come across into Canada and have been given employment. While all branches of the fishing industry have suffered as a result of the drain on the fishing districts in consequence of the works referred to, there was no scarcity of fish in the coastal waters excepting in the case of mackerel, which branch has been almost a failure this year. In their journey to and from the northern waters these fish evidently kept out in deep water instead of, as has been their habit, keeping close inshore and entering bays and harbours. The result has been a decreased catch of mackerel of about 55 per cent under an average year.

Lobsters were fairly plentiful throughout the season, and as boys and girls are largely employed in this industry, outside employment did not draw from this fishery as has been the case in other branches. There has been a considerable increase in the export of live lobsters this year to the American markets.

Another feature of the fisheries this year is the preserving of haddock. An extensive industry in this branch was operated in Isle Madame, the best haddock grounds in Cape Breton. The canned article takes well in the foreign markets and the industry promises great development.

Dogfish, which have harassed all kinds of fish in our coastal waters during the past eight years, and were so destructive to fishermen's gear, are disappearing. Only in one or two districts were they seen this year.

SESSIONAL PAPER No. 22

Inspector L. S. Ford, of Milton, says :—From what has come under my notice I am of the opinion that full returns will justify me in calling the year 1900 a good season generally for the fisherman.

Cod may show a falling off in the number secured, but the ready sale and good prices will fairly meet the deficiency. Scarcity of bait and the fact of the increased number of men engaged in the lobster business, are factors to be encountered in these statistics.

Lobsters will probably show an increased catch in numbers and value. This most valuable fishery has been successfully prosecuted, and extensive preparations are being made for the coming season. No one need to be deceived ; the increased yield does not mean that the fish are increasing by any means, but that more efforts are made to keep up the business. The close observance of stringent measures are necessary to protect this fishery, if it is to be permanent, and nothing to take its place is in sight at present.

Mackerel, in some places, show a large increased catch. Lunenburg phenomenally so—15,000 barrels against 3,000 the previous year. Digby fair, while in Queen's and Shelburne they were a total failure. The Yarmouth traps did not pay expenses.

Herring will be only fair with good prices. This fish, like the mackerel, makes seemingly erratic visits to our coast. Places where once plentiful are now deserted by them. There must be some cause for their frequent absence, possibly remediable by intelligent inquiry. Herring is a useful bait fish, and in that particular its scarcity determines the catch of the more valuable fish.

Salmon yielded an average catch, the river fisheries being generally fairly remunerative. Our regulations, as regards the rivers are not now satisfactory and need amending in many instances. The conflict between the river fisherman and the mill owners has taken on chronic indications in some places, but as a whole the situation has improved. All other kinds of fish not named would seem to be about an average catch.

Inspector Robert Hockin, of Pictou, reports that an increased catch of lobsters, which is the principal fishery of the district, a good cod, haddock, and lake season, abundance of herring, and a phenomenally large catch of mackerel have combined to make this season the best for years. Not only have fish been abundant, but prices obtained for them have been satisfactory. The salmon fishery returns show a slight increase on the Bay of Fundy, Atlantic Coast and Straits of Northumberland. The shad fishery, which last year gave excellent results, will show a decrease of about 75 per cent.

Owing to the mildness of the winter months the smelt fishery was not successful. The ice was not strong enough to allow bag-nets to be operated, and the fish that were caught were not marketed in the best condition, and hence the prices obtained were small. The shad and smelt fisheries are, however, not of sufficient importance to affect the results of the season's operations to any great degree. Other fisheries will show results about an average catch.

NEW BRUNSWICK.

Inspector J. H. Pratt, of St. Andrews, N.B., states that the catch of nearly all kinds of fish for 1900 will be found below that of last year, and some kinds will show fully 25 per cent of a decrease. The value of the catch will also be found much below that of any season during the past ten years. This falling off will be most apparent in the

herring fishery of the district, more especially in the waters of Grand Manan, whose fishermen claim that the herring catch has been the poorest they have experienced for at least twenty years. Various reasons are advanced to account for this decrease, some of them quite plausible, but, as yet the matter is enveloped in doubt. The pack of sardine herring at the numerous sardine factories, will return about a 30 per cent deficit from that of last year, showing how this decreased herring catch will very seriously effect even the skilled labour market in the state of Maine.

Lobsters will yield about the same as heretofore, with a probable increase in value of catch, although, more traps, men, and labour were required to capture them. When the statistics are all in, line fish of all kinds will show a decrease, which can be attributed not to any scarcity of fish, but to the great want of herring for bait at the time line fish were plentiful, and, also, to the fact that many of the former handliners, and trawlers engaged in weir fishing, which yielded them much poorer returns than if they had remained at their old calling. Large herring, suitable for smoking purposes, will also show a decrease this season. The much desired mackerel schools, I regret to say, did not put in their appearance in the Bay of Fundy this season, although many good hauls were made by United States seiners off the entrance to the bay. The very nefarious method of killing pollock by exploding dynamite among the numerous schools of this fish in the waters off Grand Manan, introduced to the fishermen's attention for the first time this year, is claimed by the majority of the Bay of Fundy fishermen, to be the principle cause of the unusual scarcity of fish in these waters, and must to a certain extent, injuriously effect the other fisheries of the Bay of Fundy.

Inspector R. A. Chapman, of Moncton, says that the aggregate of fish caught in 1900 will be somewhat larger than in 1899, while the number of *salmon* netted was about the same as in previous year, fly fishing was better than for several seasons, and the streams seemed well stocked with parent fish last fall. Spring *herring* were very plentiful and immense quantities taken for food, bait, etc. Fall fishing on the banks between Caraquet and Miscou was also unusually good and a larger catch of fine fish secured and sold at good prices. The catch of *codfish* up to September 13, was the largest for many years but the gale on that date, when thirteen fishing schooners belonging to Gloucester County, were wrecked and forty seven lives lost (the most fatal ever known) made the fishing thereafter very irregular, but the quantity taken during the whole season was above the average and prices ruled high.

The take of oysters has been hardly up to the average especially at Baie du Vin where the quality is inferior, but the reserve in Shediac harbour, which was opened on October 20 for three weeks fishing, produced about eleven hundred barrels of fine large oysters, all the small ones having been returned to the water. Of hard shell clams (quahogs) about ten thousand (10,000) barrels were raked in Buctouche and Cocagne which were shipped to the United States. This is a comparatively new fishery and is progressing. Between three and four thousand barrels of the ordinary clams were canned at Inkerman by Messrs A. & R. Loggie. The take of *smelts* will even be above the large one of the year before, which exceeded three thousand five hundred tons, yet these fish are not decreasing, but on the contrary they appear to be more abundant than ever.

The catch of lobsters, notwithstanding increase of factories and gear, is scarcely up to that of 1899, except in the narrow part of the straits of Northumberland, where probably owing to change of the fishing, it might be fully as large. Mackerel were

SESSIONAL PAPER No. 22

unusually abundant early in the season, and large catches were made, but they were of inferior quality ; later on as the quality improved the quantity diminished. The catch of other kinds of fish was about an average one. Taking the quantity and prices into consideration the past year has been a good one for the fishermen and dealers.

Inspector H. S. Miles, of Oromocto reports that the fishing operations there have been of a most satisfactory character. Although there has been a slight falling off in a few lines, yet the increase in others and better general prices more than compensated for the deficiency, particularly so in regard to lobsters. Owing to a change in the regulation regarding size, none under $10\frac{1}{2}$ inches were allowed to be taken from the traps ; this reduced the catch but so enhanced the price that in the end the fishermen received more than for a larger catch last year. Among the other fish in which there was a decrease may be mentioned salmon and herring. Those showing an improvement were cod, hake, haddock, pollock, eels and sardines.

PRINCE EDWARD ISLAND.

Inspector J. A. Matheson, of Charlottetown, reports that the value of the fisheries of this province for the season of 1900 will be about an average one. The lobster fishing, to the surprise of many, has held out well, and it now appears as if the present catch may be maintained if the regulations can be enforced. Cod and hake were plentiful during the first part of the season, and large quantities were taken, but owing to the rough weather very little fishing was done during the fall. The oyster fishing in Richmond Bay has been a fair season, but in East and West Rivers the catch was much below that of last season. Good prices were obtained and the fishermen made fair wages, and shippers were well satisfied with the season's business. The mackerel fishing was a great improvement on the last few years' catch. All other fishing gave about an average yield.

PROVINCE OF QUEBEC.

Commander Wakeham, Officer in charge of the Gulf of St. Lawrence Division, reports that in spite of an unusually rough season the returns for 1900 will show an increase in the total yield from the fisheries, over each of the three preceding years. This will be due to an increase in the cod, salmon, and herring fisheries. The season was unusual in that, on the lower north shore between Cape Whittle and the Strait of Belle-Isle, during the summer time cod fishery, June and July, the coast was blocked with heavy Arctic ice, which coming down from Davis Strait along the outer Labrador was, about the 20th of June, by constant east wind, driven in through the Strait of Belle-Isle, and up along the north shore coast, entirely putting a stop to the usual summer inshore fishery made with seines and trap-nets. A large fleet of vessels from Nova Scotia and Newfoundland were on the coast as usual, for the fishery. Most of these vessels did nothing whatever. About the 25th of July, it looked as though we were in, for the fourth consecutive season, for a complete failure in the Labrador cod-fishery ; fortunately however, for the resident population, after the vessels, with one exception, had all left the coast, fish struck in abundantly and good catches were made with hook and line. Nothing was done anywhere in the Gulf division during the fall cod-fishery, as after the 13th of September we had a succession of heavy gales, which brought wreck and disaster all round the coast. Fish were abundant on

64 VICTORIA, A. 1901

calm days and bait plentiful, but after the unfortunate loss of life at Percé and Carquet, and the general wrecking of boats, fishermen were disheartened and nervous about going any distance off shore. In spite however of the failure on Labrador in summer, and the almost total absence of a fall fishery, at the leading stations, the cod-fishery for 1900 was a good one.

Salmon were below an average in Bonaventure and Gaspé, but very abundant on the north shore and Labrador. *Herring* were also plentiful and remained late on the coast, at this date (4th of December) they are still abundant in Gaspé Bay. *Mackerel* and *Lobsters* will both show a decrease, though in the case of the latter, the fishing season at the Magdalen Islands, Anticosti, and the north shore was, under the new regulations, extended by two weeks. The fall *Smelt* fishery in Gaspé Bay was good, and had the steamer *Admiral* been continued on the route to Dalhousie later in the season, as she should have been, the catch could easily have been doubled.

The decision in the Fox Bay case was, as was expected, in favour of Mr. Menier and against the settlers, who were early in the season removed to Manitoba. Arrangements have been made by Mr. Menier with a gentleman from Nova Scotia, who has had an extended experience in the fisheries, to take charge of, operate, and develop the fishing possibilities of the island. Already extensive buildings are being put up at Fox Bay, a tank steamer is ordered to be built to carry the fish alive from the fishing grounds to the packing houses, or to the nearest port where connection can be made by rail for export, fresh to market, in refrigerator cars. A large number of fishermen will be wanted in the coming spring to prosecute the various fisheries of the island. These men will have to be shipped during the winter, and will most likely be secured among the fishing populations of Gaspé and Nova Scotia.

Inspector N. Lavoie, of L'Islet, submits the following report on the result of fishing operations in his division during the season of 1900 :—On that part of the coast of the counties of Bonaventure and Gaspé, summer and fall codfishing was good, but would have been better had it not been for the frequent and severe storms which were experienced when fishing was at its height. West of Port Daniel, fishing is not so much carried on as elsewhere, most of the people being engaged in agriculture. Herring fishing was excellent and the trade seems to revive. Two firms alone shipped 1,500 barrels out of Grand River division, and other merchants have also done as well. Lobster fishing will have a falling off. In 1880 the lobster catch for Gaspé and Bonaventure was 9,345 cases, while it only yielded 3,285 in 1900. Heavy storms and the general destruction of fishing gears largely contribute to this decline. The size of lobsters was generally larger than usual, most of them measuring from nine to sixteen inches.—Prices ruled from \$9 to \$12 a case on the spot. Salmon fishing was somewhat better than last year, although the rivers kept very high in spring and summer. Prices ruled very high, 12, 15 and 20 cents a pound being paid.

From Gaspé to Métis codfishing is not so eagerly pursued as in former years. People now give part of their time to agricultural operations, to their great advantage. During the last 20 years five new parishes have been established on this part of the coast, and there are everywhere evidences of progress and comfort. Herring and squid were abundant as well as cod. Very few white whales were seen, to the great delight of cod fishermen, because these mammals chase the cod out of their fishing grounds. Salmon fishing was about the same as in 1899. Lobster fishing was a failure. Trout fishing

SESSIONAL PAPER No. 22

was a trifle less remunerative than last year. From Métis to Lévis the result of this year's fishing operation will be about the same as last year.

Inspector A. H. Belliveau, who has charge of the western division of the province of Quebec, report as follows:—From the meagre information derived at my hurried visits to the principal fishing centres under my charge, I am under the impression that the yield of fisheries for 1900 will far exceed that of the season just published. Almost everywhere along the St. Lawrence, particularly on the Richelieu River, Chateauguay, Verchères, Lake St. Pierre, and even below Quebec the spring fishing was better than for years past. On a certain Thursday in the beginning of June last, Overseer Riendeau and I estimated that between fifteen and twenty tons of fish had been brought that morning to the markets of the great Canadian metropolis from the neighbouring districts extending from Sorel to Beauharnois. It is true that most of these were coarse fish, but the weather being still cool, good prices were readily obtained, and before eleven o'clock all had been disposed of. I regret to say that some were so small as to render them almost unfit for food. The small meshed verveux of Richelieu and Yamaska districts were blamed for the capture of these immature fish.

I am pleased to note that the provincial authorities seem disposed to exercise a more efficient protection. In future all their game-keepers and even forest and fire rangers will be clothed with the powers of fishery officers. These, with the assistance of the different clubs dispersed over the extensive inland areas, will no doubt achieve better results.

Many of the remarks in my report, page 190, apply to this year as well as last.

ONTARIO.

Inspector F. H. Cunningham, of Ottawa, submits the following report on the fisheries of the eastern division of the Province of Ontario, for the year ended December 31.

The waters of this division are frequented by nearly all the varieties of sporting fish of the finest kind, and it is of the utmost importance that the regulations should be strictly enforced. I am glad to be able to state that there has been a decided improvement in this respect during the past year. Of course it cannot be expected that all poaching can be prevented; but I firmly believe that the officers of the Ontario Government are doing their best to enforce the law.

The past year has been an average one, from the angler's standpoint. Charleston Lake, Rice Lake and the Bay of Quinté afforded excellent fishing. No place in Canada furnishes better proof of the success of artificial fish breeding than Charleston Lake, where, notwithstanding the increased amount of fishing, the fish (salmon trout) are steadily on the increase, consequent upon the supply of young fish that are deposited in these waters each year from the hatchery located in Ottawa.

During the year just closed, a pond for the propagation of black bass has been constructed in the Bay of Quinte district, and as applications are being received from all parts of the Dominion for young bass, it is expected that this pond will fill a long-felt want.

In the spring of last year I superintended the distribution of a considerable quantity of fry from the Ottawa hatchery, and while these little fish were planted in

fine condition, it appeared to me that some of the lakes did not afford all the natural conditions requisite for salmon-trout to reach maturity. In this connection, applicants for fry should be requested to make their application to the department early in the summer, and thus enable the inspector to examine and report on the suitability of the waters in which the fry are to be placed.

Owing to other outside work, I have not been able to give as much attention to my district as I would have wished, but next year I hope to be able to devote considerable time to inspectorship duties.

Inspector O. B. Sheppard, of Toronto, reports as follows :—In the Lake Huron and Georgian Bay districts the catch of trout and pickerel has been equal to or slightly above last season's, while whitefish, herring and sturgeon show a falling off.

In Lake Erie the catch of pickerel has been an exceptionally good one, with herring fully up to or above the average. The catch of sturgeon has decreased very materially, and the catch of other fish has been about an average one.

In that portion of Lake Ontario, in my division, this year's catch shows a decided decrease all round, with the single exception of herring, which has held up exceptionally well.

In the inland waters, which, with the exception of Lake Nipissing and the waters running out of it, are chiefly given over to local and sporting fishermen, the catch has been about the same as last season (a poor one), not having recovered from the depletion that occurred last season by reason of the non-appointment of overseers when the protection branch of the fisheries was taken over by the Provincial Government until too late to have the regulations enforced. I am, however, pleased to state that a great deal more attention has been given this branch of our fisheries this year by the provincial authorities, with whom I have had many interviews on the matter, and I confidently look forward to a decided improvement in the near future.

I am strongly of the opinion that a great and lasting improvement, especially in the bass fishing, might be made by restocking the waters in the more settled districts, which have been practically fished out, with fish (either fry or parent fish) taken from the waters of the more northern lakes and rivers, where they are very plentiful and the country very sparsely settled, and where tourists seldom visit. This, in my opinion, could be done at a nominal cost, and would have a very beneficial and lasting effect. I am sorry to report that the carp are increasing rapidly in many of the waters of my division, and are a great menace to the fishery interest, and would suggest that, if possible, some means be devised to lessen their numbers and prevent their increase. The sturgeon have been gradually decreasing in my division, except in the more northerly part, and during the present season, especially in the southern part, the catch has been very small indeed, and I am convinced that unless something is done to prevent it, this fish will soon be practically extinct. In the northern part of my district, especially in Lake Nipissing and the rivers leading therefrom, they are still plentiful, but they are being slaughtered at a fearful rate, one firm having shipped this season 70,000 lbs. of caviare. As the roe is the part of the fish that is of the most value, and it is taken just before spawning, the sturgeon has no chance to reproduce itself, and the end must shortly come. I would strongly advise a drastic measure of protection for this fish for a few years, and would also suggest a transplanting of a number of them from the northern waters, when they can be taken to some of the more southern waters where

SESSIONAL PAPER No. 22

they are almost extinct. These fish being very tenacious of life, this could easily be accomplished, and at a very small cost, as the transportation would be entirely by water.

Inspector A. G. Duncan, of Marksville, makes the following preliminary report on this season's operations of the fisheries for the Western Division of Ontario:—I have visited during the summer the most important fishing points of this district, and I find the catch of whitefish, trout and pickerel aggregate about the same as last year. The number of men employed and number of gill-nets are in excess of last year. I also visited the Nepigon River this spring, which is the finest trout stream known in America, and every season is visited by sportsmen, not only from all over this continent, but even from Europe. This sport furnishes employment for some two hundred guides during the summer, at an average wage of two dollars per day and board, each year finding an increased number of visitors. The Nepigon is still holding its own as a producer of the finest speckled trout. There are nine portages on the river, and I found that all the camping grounds were well kept and clean. This stream is protected by an officer of the Provincial Government, and I also found that the guides take great interest in the protection of this stream. The weight of the trout caught runs from two to seven pounds. I saw an American lady with one seven pounds weight. Specimens of these trout are taken and mounted on birch bark for ornamental purposes. There has not been as much illegal fishing done this season as last. The fishery overseers of the Ontario Government have acted in a more vigorous way in detecting and confiscating illegal nets. They have seized and confiscated a number of trap-nets on the Georgian Bay, near Bustard Island, Bad River and Badgely Island.

BRITISH COLUMBIA.

Inspector C. B. Sword, of New Westminster, reports as follows:—In the Fraser River district this year sockeye (*O. Nerka*) and cohoes (*O. Kisutch*) have been very scarce. The northern canneries, however, made good packs.

The deficiency occasioned by the failure of the sockeye and coho runs has, however, been partly made up by the canners having this year put up between 90,000 and 100,000 cases of qualo or dog salmon (*O. Keta*.) A market is found for these in South America. Some 7,000 cases of humpbacks (*O. Gorbuscha*) were put up last year, otherwise the packing of the dog salmon and humpbacks is a new industry here. The removal of the close season between the sockeye and coho runs has greatly facilitated the utilization of these varieties. The returns are not yet all in, but the gross pack for the province will amount to nearly 550,000 cases as against 765,519 cases in 1899, 492,550 cases in 1878 and 1,027,180 cases in 1897. In addition to the salmon put up in cans there will be an increase as compared with last year of the quantities exported, dry, salted and frozen. While the catch of sturgeon has been very small, there is an increase in the yield of halibut.

A larger number of commercial salmon licenses were issued than heretofore from this office (4,892).

PARIS EXHIBITION, 1900.

In my report last year I made reference to the fact that this Department had undertaken to make an adequate display of Canada's vast fisheries wealth at the great exhibition in Paris. A large number of showcases containing specimens of

64 VICTORIA, A. 1901

fish, aquatic birds, fishery products in great variety, a unique collection of furs and examples of heads of big game were sent to Paris, and these exhibits, illustrative of the marine, fishery and the sporting resources of the Dominion of Canada, attracted wide attention and formed a notable feature even amongst the representative displays of all nations.

It is gratifying to find that not only did the exhibit call forth admiration and praise from the public, but official experts and exhibition authorities deemed the Canadian fisheries collection worthy of the highest awards. A Grand Prize was awarded for the high character of the fishery products displayed, and the gear and instruments of fishing. A Grand Prize was also awarded in class 52 for the splendid fur exhibit. In class 53 (fishery products and fishing gear) I was the recipient of a gold medal, and a silver medal was awarded to Mr. Andrew Halkett, as collaborateur. In class 52 (game and fur exhibits) a gold medal was awarded to the Honourable the Minister of Marine and Fisheries for the Department's exhibit; while four further gold medals and five silver medals were awarded, two of these being granted to Dr. Wakeham for collection of deep sea shells, and Mr. A. Halkett, of this Department, for his work as a naturalist in connection with the exhibit. Two bronze medals in this same class were gained by Mr. Franklin Brownell for the pictorial decorations in the Canadian Court, and a gold medal was awarded for the Prince Edward Island oysters. The general character and splendid quality of these oysters excited unusual admiration, and generally I think that Canada has every reason to feel proud of the position gained by her exhibition amongst the fishery and game exhibits of all countries.

In accordance with the decision to take part in the Glasgow exhibition in May next, the cases of exhibits have been transported from Paris to Scotland, and the question is now being considered whether, on the close of the Glasgow exhibition next fall, they might not well find a permanent home in the Imperial Institute, London, England.

In the Fisheries Museum at Ottawa, which has been practically depleted by the removal of fish and fishery products to complete the collection sent to Paris, it will be necessary to form an entirely new collection. The economic and scientific aspects of the fisheries will be given more adequate representation under the skilled superintendence of Professor Prince, the Commissioner of Fisheries, who will organize the new collection. In view of the vastly increased interest in Canadian fisheries, this step is of great public importance, and whereas the former exhibit, although interesting and valuable was admittedly incomplete, a more worthy display of our fishery wealth will ere long be made in the museum building on O'Connor street.

It is a matter of satisfaction that a general survey of the fisheries of the Dominion shows continued prosperity on the whole, and the exhibits in 1900 in Paris and in 1901 in Glasgow, will, there is every reason to anticipate, open up new and lucrative avenues of trade, of which full advantage has not yet been taken.

I have the honour to be, sir,

Your obedient servant,

F. GOURDEAU,
Deputy Minister of Marine and Fisheries.

SPECIAL
APPENDED REPORTS

BY

PROFESSOR E. E. PRINCE

Dominion Commissioner of Fisheries

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1. PLANTING YOUNG FRY: ITS COMPARATIVE ADVANTAGES.
 2. THE VERNACULAR NAMES OF FISHES.
 3. ACCLIMATIZATION OF FISH, FRESH-WATER AND MARINE.
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1900

I.

PLANTING YOUNG FRY: ITS COMPARATIVE ADVANTAGES.

BY PROFESSOR EDWARD E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, OTTAWA.

It was my intention, in the present report, to treat exhaustively the much discussed question of the planting of yearling or 'fingerling' fish, as compared with the planting of newly-hatched fry. The latter method of stocking waters is that mainly carried out in the system of artificial fish-culture conducted by the Department of Marine and Fisheries. The controversy, respecting the merits of the two systems, has been actively carried on for more than a quarter of a century, and fish-culturists are still divided into two schools, the partisans of one school being as emphatic and zealous in their own special advocacy, as the partisans of the other. The adoption of one system does not imply the total disparagement of the other, and there is certainly much to be said for the rearing of the fry of fishes, in our hatcheries, until they are robust and independent; until, in other words, they are able to look after themselves. In order to do justice to the two methods: the 'young fry' method, and the 'fingerling' or 'yearling' method, the various points raised require to be dealt with exhaustively and I therefore propose to treat in a future report the whole subject with some thoroughness, in order that the practical aspects of the matter may be fully set forth, as theoretical considerations, have, it must be confessed, hitherto figured very largely in this important discussion. My present purpose is simply to state, in the meantime, the principal points which may be urged in favour of the system carried out in Canada. I shall do so as concisely and as clearly as I can, reserving for the present those more technical and complex features which can be understood by the embryologist, but are of less moment to the practical man, to whom the more salient points appear, of course, to have the greatest weight. It is necessary to point out that by the terms fry, young fry, or newly-hatched fry, is meant the true larval condition, before the features of the embryonic stages are lost. When a young fish emerges from the egg, at the close of the incubation process, it bears no resemblance in most cases, to the parent fish. It is, as a rule, not at all like a fish: but resembles a small worm with a protruding bag of yolk attached to the under side. I have often heard people declare, on seeing newly-hatched fish in a jar or tank, that they looked like wriggling insects. A minute scientific examination shows that the young fish larva is not only in external form and features, but also in internal structure and anatomical arrangement quite different from a fish, indeed is almost as unlike as the caterpillar is unlike the butterfly. At first the newly-hatched larval fish feeds only on its store of yolk, but as soon as this is exhausted, it begins to change its shape, the mouth, which at first is not used at all, becomes actively movable and numerous minute teeth protrude from the surface of the jaws. Indeed, in the young shad, for instance, teeth develop long before the food-yolk is used up. The late Professor Ryder called attention to this precocious appearance of teeth in the infant shad. Of his previously published statement 'that the yolk sack disappeared on the fourth to the fifth day after the young fish had left the egg,' he said (Bullet. U.S. Fish. Commis., 1881, p. 241): 'Although this statement is in a broad sense true, I find upon more accurate investigation that there is a small amount of yolk retained in the yolk-sack for a much longer time. It appears in fact that there are really two periods of absorption of the yolk which may be very sharply distinguished from each other. The first extends from the time of hatching to the end of the fourth or fifth day, according to temperature,

during which most of the yolk is absorbed. . . . The second period of the absorption of the yolk extends in the shad over about twice that of the first, or about ten days. . . . The function of the yolk-sack, during the first period, appears to be to build up the structure of the growing embryo ; during the second, not so much to build it up as to sustain it in vigorous health until it can capture food to swallow and digest, so that it may no longer be dependent upon the store of food inherited from its parent. Minute conical teeth appear on the lower jaws and in the pharynx of the young shad, about the second or third day after hatching. . . I have never observed food in the alimentary canal until ten or twelve days after the young fish had left the egg. At about the beginning of the second week considerable may be seen in the living specimens. But the intestine is often not yet very densely packed with food even at this period. At the age of three weeks an abundance of food is found in the intestine.' A young fish a month old, or even three weeks old in some species, begins to assume the fish-like form, the fins losing their embryonic or larval form, and the external and internal structure of the growing creature changes to a more mature condition. Between the earliest or immature larval stage and the more mature stage, when the form of the adult begins to be recognizable, there is often a peculiar post-larval stage, characterized in some marine species by the most extraordinary transient developments, which often give the young fish a most grotesque appearance.

Broadly speaking, then, there is a larval and a post-larval condition, the latter insensibly passing into the still small, but externally mature condition called by fish-culturists the fingerling stage. The latter is often called the yearling stage, although the fish may not be a year old. Indeed the rate of growth in any particular batch of fishes varies very much. Frank Buckland drew attention to this in his little work entitled 'Fish Hatching' (London, 1863), and quotes an authority as saying that of three specimens of young salmon taken from the Stormontfield ponds in Scotland, on April 1, 1863, all of the same age, one was $6\frac{1}{2}$ inches long and weighed 646 grains; another was $3\frac{5}{8}$ inches long and weighed 135 grains; and the third was $2\frac{1}{8}$ inches long, and weighed 23 grains. The last had the dark parr-bands along the sides, the second had indications of small scales, and in the largest the scales were large, silvery and in an advanced stage of growth. As Buckland remarked, young fish whether kept in hatchery tanks, reared in large ponds or turned into streams, vary very much in growth; some individuals growing more rapidly and attaining a greater size than others. In a study which I made at the Marine Biological Station of Canada of three batches of Pacific salmon fry this year, I found a similar though not quite so marked a difference in growth. The specimens in each series (five or six dozen fish in each series) were presumably about the same age, and in one series they varied from 42 millimeters ($1\frac{1}{16}$ in.) to 31 millimetres ($1\frac{1}{4}$ in.) in length. In another batch (belonging to the brood of another year) they varied from 65 millimetres ($2\frac{3}{8}$ in.) to 38 millimetres ($1\frac{5}{16}$ in.) and in another year's series they varied from 47 millimetres ($1\frac{1}{2}$ in.) to 34 millimetres ($1\frac{3}{8}$ in.) The well-known authority on angling, Mr. Stoddard states, that the nature of the food greatly influences growth: 'Trout were placed in three separate tanks, one of which was supplied daily with worms, another with live minnows, and the third with those small dark coloured water-flies which are to be found moving about on the surface under banks and sheltered places. The trout fed with worms grew slowly, and had a lean appearance; those nourished on minnows, which, it was observed, they darted at with great voracity, became much larger; while such as were fattened upon flies only, attained in a short time prodigious dimensions, weighing twice as much as both the others together, although the quantity of food swallowed was in nowise so great.' Under natural conditions, however, where the food available for all the individuals in a brood of young is practically the same, the difference in size must be mainly due to inherent variability, dependent upon very obscure causes. Such variation in growth, which is so noticeable within the limits of one species considered separately, is no less marked when we compare several different species together. One kind or species attains a known average size at a certain stage in the growth of the young. Thus a newly hatched salmon measures a little more than half an inch in length; at the fourth week the larva has doubled its length, and in the third month it attains two inches, while in the fourth month it is no less than two and a half to nearly four inches long,

SESSIONAL PAPER No. 22

and a month later as much as five inches in length. Brook trout in the fourth month are usually two inches from tip to tip, three inches when nine or ten months old, and five inches when a year old. Lake trout (*Salvelinus namaycush*) are six inches long at the end of twelve months, and black bass are four to six inches. The growth of very few marine larval fishes has been observed, but it is interesting to note that in a batch of young wolf-fish (*Anarrhichas lupus*), a fish reaching a length of five or six feet, the larval forms were a fraction over a quarter of an inch long on hatching out, in the fourteenth week (3½ months) they were not more than half an inch in length, this slow growth being probably due to confinement in tanks.

Marine fish being as a rule of very minute size and delicate in organization when hatched probably reach the same length as fresh water species in a much more extended period of time. The observed variation, which is frequently so very great in young fishes of precisely the same age, is of moment in connection with this question of young fry *versus* fingerlings. Certain fishes moreover exhibit a cannibalistic habit at a very early stage. Black bass when very young, devour each other, even when little over an inch in length, so that it is necessary to take special steps to prevent this. I have on a previous occasion (Rep. Canadian Lobster Commission, 1898) pointed out, in the case of the lobster, that amongst young lobster fry 'cannibalism is frequent, and the method adopted of attacking each other is very striking, as the young lobster barely a few weeks old invariably selects the most vulnerable point, viz., the opening behind the head-shield. The stronger larva springs upon the back of the weaker and savagely bites him at the point named.' Frank Buckland describes the voracity of fingerling salmon and trout and said 'they will certainly eat the young grayling when they can catch them, for they are very active: they also eat young perch. I have placed perch spawn in their tanks, and as the perch, which are exceedingly minute, hatch out, they are caught up and devoured in an instant.'

Whatever arguments may be urged for or against the prevailing system of planting newly hatched fry, it can hardly be doubted by any fair-minded critic that the attempt to stock depleted waters with countless millions of young fish, as is done in Canada, must have some beneficial results. There is certainly much evidence in favour of the view that benefit has resulted. Would better results follow the adoption of the system of planting advanced fry or fingerlings? There are certain points urged against planting very young fry which merit some attention. Nothing, it is said, can be more helpless and defenceless than young fish immediately on hatching out. They must be at the mercy of numberless enemies. This objection has this defect that as a matter of fact most of the fry are some days, or at any rate some hours old when deposited in the open waters. The planting is postponed until a large quantity have liberated themselves from the egg, some time is occupied in removing them from the tanks, carting them to the railway or conveying them by wagon to the more or less distant localities to be stocked. In other words the youngest fry are always 12 to 48 or 72 hours old and are not 'newly born' young fish when placed in lakes or rivers. Two or three weeks elapse before all are planted, and the fry are thus getting older as each batch is sent off day after day during the distribution. Hence the majority of artificially hatched fry are really much older, and must be more sturdy and robust, than the delicate young fish exposed on the natural spawning beds. The further objection that artificially hatched fry are suddenly transferred from warmer water in the hatchery tanks to the colder water of the lake or stream outside is also baseless. The ample supply of water pouring through the hatchery troughs has been found to be, as a rule, many degrees colder than the water to be stocked. Ice is always used in keeping the water cold when transporting the young fish in large tanks. Records have been kept showing that the water in the hatcheries is more equable and cool at the distributing time than in the waters outside. The helpless fry, it has also been urged, being hatched under unnatural conditions are untaught to seek shelter, and must be devoured by watchful enemies. It should be remembered that the eggs are taken from wild parent fish. The fry hatched from these cannot fail to inherit, by the inflexible law of heredity, the instincts of their parents. They act, as indeed they cannot avoid acting, precisely as the young of wild fish do. Hence, when the fry have been carefully watched at the time of planting, they

have been noticed to act with great alertness and intelligence, and at once dart off to the nearest available shelter.

The objections usually urged, apply indeed with greater force to young fish kept for a long period under artificial conditions, and reared to the fingerling or yearling stage. Such young fish must become accustomed to the safe and protected conditions provided for them in the tanks or rearing ponds. In such ponds the usual enemies are absent, the water as a rule is warmer, and food is supplied to them, of kinds and at times wholly unlike those which obtain in the case of naturally hatched fish. 'If the fry are kept until they are of fair size,' wrote the late Francis Francis, one of the best authorities on fish-culture, 'fed regularly every day, never seeing an enemy of any kind, what will become of them when they are turned into deep water amongst foes, without the preliminary and probationary life on the comparatively safe shallows, being all unaccustomed to seek their own food, or see enemies? They are far more likely to fall victims then, and less likely to thrive on their own exertions, unless it is proposed to keep them until they are beyond the size taken by pike and large trout.' I cannot do better than quote the opinion of Mr. Francis on a further point, as it fully coincides with the view which I have already published, and to which I still adhere. 'I have heard people urge, that if the young fish are turned at an early age into the river, they will fall a prey to predaceous fish. It is possible that a small percentage of them may, but the remainder will easily learn to know their enemies and avoid them; besides, in putting them into the river, the most shallow places at the sides, and the most sheltered spots should be selected, and the fish should be distributed in small numbers in such places as predaceous fish are the least likely to come and look for them. Added to this, the remainder will thrive so much better in the wider area of the river, and will grow so much faster that this will counterbalance any slight loss.' Experiments have been tried with a view of comparing the rate of growth of fry in confined waters, and those liberated in a stream or creek and it has been shown that the fry which were planted soon after hatching and which subsisted on natural food under natural conditions grew much more rapidly than those under artificial conditions.

I am aware that some experiments in the Detroit river, carried on in 1895, under the Michigan Fish Commission, point to the opposite conclusion, for of a quantity of white-fish (*Coregonus*) fry confined in boxes in the river able to subsist on natural food, only three survived from April 20 to July 23, by which time they were nearly two inches in length, but the boxes were twice tampered with, and the results were thus deprived of their chief value, though it was noticed that a batch of several hundred kept in the hatchery, fared much better. 'These had grown rapidly, much faster in fact than those in the river,' the report states, 'and they were in fine condition... when moved (at about the age of ten months) they were three or four inches in length, in good condition, but small for their age.' No reliable conclusion can be drawn from this experiment, which is precisely the reverse of that communicated to Frank Buckland. (See *Fish Hatching*. 1863, p. 160.) 'Amongst the advantages of early turning into the river must be reckoned that of rapid growth. Some of those (wrote a correspondent to Mr. Buckland) which you and I turned in were, after only nine days, found to be three or four times larger than those of the same age left behind in the troughs.' An assistant in this experiment observed some of the young fish on the shallows, and stated that one of these liberated fish would weigh down four of the fish confined in the hatchery tanks. This is indeed what might be anticipated. Most animals are more vigorous, healthy and of more rapid natural growth than when confined under artificial conditions. 'The old idea (wrote the late Sir J. G. Maitland) was to turn out fish big enough... to take care of themselves.' But it is not a question of size, but of food, habit and training. Yearlings will live, it is claimed, where young fry would perish; but planting of fish should always be in favourable localities only.

The main considerations, which weigh in favour of the planting of newly hatched fry may be summarized as follows:

1.—The fry being placed in their natural surroundings, food, temperature, and other conditions must be more favorable than in the cramped conditions of a hatchery or a rearing pond.

SESSIONAL PAPER No. 22

2.—The fry endowed with their natural instincts inherited from the parent fish, exercise these instincts at the earliest moment, and do not become accustomed to an artificial environment.

3.—It enables a vast quantity of young fish to be handled, whereas, an infinitely smaller quantity alone can be dealt with if the labour, expense and difficulty of feeding, rearing and caring for are to be faced.

4.—Fry are most vigorous and alert soon after hatching, but when kept confined and their stock of food yolk becomes exhausted, they are less vigorous, swim less freely, and require great care in management.

5.—When fish are planted at the young fry age, the public receive the greatest return and most widespread benefit. This would not be possible were a restricted quantity of young fish merely available for planting. It allows of the maximum of output at the minimum of cost.

6.—Lastly the planting of young fry has been successful, in spite of losses when planting, and undoubted losses (from predaceous enemies) after planting. It is incredible that 50 or 80 or 200 millions of fry of various fishes can be planted in Canadian waters, as they have been planted for over a quarter of a century, and have no effect whatever. The popular opinion, the opinion of practical men, the strong conviction of fishermen especially is that the beneficial results are patent and undeniable.

It has been shown that most of the stock objections urged are not merely based on gross misconceptions, they are the reverse of the facts. The eggs in our hatcheries are, at any rate, safely shielded from numberless enemies and hurtful influences. When the fry hatch as Mr. Seymour Bower pertinently asked (in a paper in the Mich., Fish Commiss. Rep., 1896,) 'the question of how much longer they should be held, without any attempt at feeding, becomes an important one. Whitefish fry, as such, are never more vigorous than at the time of hatching: they are free swimmers, and begin to take food within a very few days. It would seem, therefore, that the sooner they are set free in their native habitat, to mingle with nature's fry the better. There is nothing to be gained by holding them and there is great risk in carrying them beyond the time when nourishment other than that supplied by the food sack is essential to normal development.' It is indeed impossible to supply food, at all corresponding to the natural food in quantity, or in its nature, to fry retained until the post-larval condition; and the resulting fish may be stunted, or at any rate will bear evidence in the adult stage of the unnatural conditions under which they were reared. They will reveal what Frank Buckland called the 'semi-tame' condition all through life.

II.

THE VERNACULAR NAMES OF FISHES.

BY PROFESSOR E. E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, OTTAWA.

The editor of a well-known organ of the angling fraternity was compelled, a few years ago, to admit, 'the utter impossibility of ever clarifying the muddle caused by anglers clinging so persistently to local nomenclature in the identification and classification of fishes.' Anglers are not, however, by any means the worst offenders, and one of the main sources of confusion and uncertainty in this matter is the inveterate habit, prevalent amongst fishermen and those who handle fish commercially, of giving special names, often without rhyme or reason, to the kinds of fish which they send into the market. With regard to kinds which are uncommon, or of no value for commercial purposes, no name is too absurd to select, and the fishery expert and naturalist while frequently experiencing difficulty in determining precisely what fish may be meant, when a fisherman or dealer uses a special name for a common commercial species, finds the difficulty infinitely increased when some rare or uncommon fish is referred to. It is, as a rule, impossible to know what is meant when a fisherman speaks of a 'Sunfish,' or a 'Dog-fish,' or a 'Minnow,' for each of these terms is habitually used for half a dozen creatures wholly different and unlike. To add to the bewilderment, scientific experts have in recent years decided to throw aside generic and specific names, which from long use and familiarity have become universally accepted and recognized, and have substituted for them, in a great many cases, obscure and even uncouth and forbidding names, which, unlike the names so long adopted, are neither descriptive nor euphonious. This exchange of well known scientific names, on which even amateur naturalists were wont with some certainty to rely, has been adopted in obedience to a principle of priority, consistent and defensible no doubt from an antiquarian point of view, but wholly confusing and misleading from the standpoint of utility and convenience. The once uniform and reliable scientific names, which were a safe refuge under the bewildering variations of local nomenclature, have been thrown into hopeless and inextricable confusion. Thus the familiar *Gadus aeglefinus*, the common haddock, has become *Melanogrammus aeglefinus*; the large tunny is *Albacora thynnus* instead of *Thynnus vulgaris*: and its close relative the bonito is *Gymnosarda pelamis*, instead of *Pelamys sarda*.

It is no matter of surprise that the early settlers in this western continent, anxious for old association's sake to keep in use names familiar to them in the old land, should have applied such names, borne by very different creatures, to fishes, birds and animals new to them in this country and bearing some more or less distant resemblance to the originals. Thus it is easy to understand that the name 'robin' was applied to a bird which resembles in hardly a single feature the original *Erithacus rubecula*, or robin redbreast of England. The large aggressive loudvoiced nervous thrush 'every motion decided and alert,' the American robin (*Merula migratoria*,) is the reverse of the small delicately-formed, retiring bird with throat and breast of a deep orange red colour, whose song is of a sweet, low, plaintive character, and whose habit is to haunt the dwellings of men only in the winter time, for the English robin, unlike ours, is non-migratory. Our robin is a typical, somewhat noisy, thrush—the original robin a retiring, tender-voiced warbler, indeed the *Sylviinae* as a whole differ in every feature from the thrush family the *Turdinae* to which our North American robin belongs. It was no doubt for precisely similar reasons, largely old association, that the name speckled-trout or brook-trout, was applied to that most widely distributed and highly esteemed fish

SESSIONAL PAPER No. 22

Salvelinus fontinalis. In the report of the Pennsylvania State Commissioners of Fisheries (1895, p. 221,) reference is made to this instance of mis-naming, and the following remarks put the matter so appropriately that I quote the paragraph verbatim:—As recently determined the beautiful brook-trout of our waters is not a true salmon but a charr, a circumstance which need not cause the angler or the lover of this attractive fish any sorrow, since all the members of this group of salmonoids are noted not only for their beauty and grace but their game qualities. No truer words were ever spoken than those uttered by an eminent ichthyologist when he declared that ‘no higher praise can be given to a salmonoid than to call it a charr.’ It came by the name of trout through the Pilgrim fathers who, when they first saw it in New England, mistook it for the same fish they knew in their own Devonshire streams. Had they come from the north of England or from Scotland and been more observing, the error in all likelihood would have never been made. But brook trout or speckled trout or charr, or whatever name may be applied to the fish, it needs no description. There are few anglers who are not well acquainted with this most beautiful and graceful of fishes. It is more eagerly sought for and by the majority of fresh water sportsmen in the east prized more than any other member of the finny tribe, while epicures regard its flesh as unsurpassed for delicacy and richness of flavour. Unquestionably, the pure cold water and the usually picturesque character of the streams in which the brook trout live has something to do with making this fish a general favourite among sportsmen.

Amongst many evils, which result from a lack of uniformity in the use of popular names, are the errors which inevitably appear in statistical records and comparative tables. Unless the precise application of any particular name frequently used indifferently for several fishes, be first ascertained, the information afforded by official reports may be most misleading. Familiar names like trout, salmon, smelt, herring, and pike, are used with utter carelessness, and so grossly misapplied that it is difficult to understand how any intelligent community can continue, year after year, to keep in circulation names so utterly inappropriate to many of the fishes upon which they have been imposed.

As an example of the erratic use of popular names even in official publications, I may instance the case of a very valuable, and sumptuously illustrated report of a Game and Fish Association on this continent, in which I find that the pike-perch, doré, or wall-eyed pike, is repeatedly called ‘Susquehanna Salmon.’ It is so called in the table of spawning seasons given in the book; but in the text, only a few lines lower down on the same page, the fish is referred to as the wall-eyed pike, whereas in the body of the report the same fish is several times mentioned as the pike-perch. This last named term is the most appropriate and most descriptive, and has been in common use for a century or two at least in European countries. This instance will illustrate the confused state of mind—not to say of nomenclature, which leads to the use of three almost contradictory terms for one fish in the pages of the same report.

Similarly the weakfish or squeteague (*Cynoscion regalis*) in the southern states is called ‘trout’. Indeed all the various species are thus erroneously named, as Professor Jordan says:—‘All . . . are absurdly called “trout” in the southern States—a name also applied in the same regions to the black bass.’

The misnomers, innocently applied for old association’s sake, are responsible for much confusion; but this has been enormously increased by the less defensible and erratic method, adopted by men who have applied names which, through ignorance, they imagine to be rightly applied. Numerous examples of this occur amongst fishes, but perhaps the most glaring instance is the case familiar to the hunter of the magnificent stag of the western hills and plains—the *Cervus canadensis* which was called elk by men who no doubt imagined, in pure ignorance, that it bore some resemblance by reason of its size, and other features, to the elk of Europe. The European elk is really almost identical with the moose of North America. The late Professor Spencer Baird once wrote: ‘It is somewhat unfortunate that the European name of this animal, the elk, should be applied here in America to an entirely different animal or deer. Much confusion has been produced in this way, and it becomes necessary to ascertain the nationality of an author before it is possible to know exactly what the word elk is intended to convey.’ Nor is the name wapiti, generally supposed to be the Indian name for the great Canada stag, more accurate, for Mr. J. B. Tyrrell has recorded that the Indian

name for this fine mammal is 'waskasew.' Errors in nomenclature hardly less glaring are not uncommon in the naming of fishes, indeed they are far too frequent.

There are indeed, speaking in general terms, at least seven ways in which the names of fishes, as of birds and other animals, have been chosen and applied on this continent. First, we may note the adoption of Indian or Indo-French names—names which the early settlers continued to apply to animals because they were already in use. As a rule, these early names always more or less accurately describe features in the forms on which they were bestowed. Thus the name maskinongé, commonly, but very erroneously spelt muskellunge or mascalonge in the United States, is really an Indian name, the Chippewa name for pike being 'Kenosha' and the prefix Mis or Mas means large or great, so that Maskenosha or Maskinoge (corrupted into Maskinonge) is really a large deformed pike. So also the word ouananiche, sometimes spelt wananishe, or winninish, is really the old Montagnais Indian name, the Montagnais Indians being the Algonkin tribes who dwelt in the wild mountainous Saguenay country, as did also the Naskapis or Labrador Indians. In some learned and exhaustive articles upon the original name for the 'land-locked salmon' of Quebec Mr. E. T. D. Chambers has pointed out that the usual signification 'little salmon' (*iche* or *ishe* being a Montagnais diminutive termination) is not correct, *ouen-a*, pronounced 'when-na' is an interrogative, while *ounans* or *unans* is an eddying pool below a fall or rapid; and from either terms may have originated the word 'ouananiche,' which may thus mean 'the little what-is-it fish' or the 'little below-the-rapids pool fish,' both of which names may be paralleled by many examples in Indian nomenclature. Thus the large Mackenzie river food-fish, combining features of the pike family and the whitefish, so puzzled the early French explorers that they called it the 'dont-know-what-fish,' or the 'undetermined fish' the *inconnu*—a name which the fish permanently bears. The word Touladi—a variety of the great lake trout is practically the old Indian name, whereas "lunge" the name in some parts of eastern Canada for the same fish, is no doubt a French term having reference to the length of the body in this species as compared with the brook trout or the whitefish. The name for the small but valuable salmonoid, the blue-back salmon of the Fraser and other British Columbia rivers, viz., the Sockeye, is really that of the Indians inhabiting the lower part of the Fraser River—the word being Saw-quai or Suck-kia, a name which is replaced by the term Ta-lo higher up the course of the river.

It may be pointed out that in the United States the fish is usually known as the red-fish, more perhaps on account of the brilliant red colour assumed by the male when on the spawning grounds, than the deep red flesh, which is very characteristic of this species and gives it its special value on the markets.

On the other hand such names as gaspereau for the migratory alewife, called 'kiak' in Nova Scotia, is clearly a French-Acadian name, and it may be that *togue*, as certainly *longe* or *lunge* applied as already stated to varieties of the great lake trout in New Brunswick and the province of Quebec, are French, unless the word *togue* be Indian. Dr. Perley says, however, that the word *togue* is used by the lumbermen, while "the Indians designate it by a name equivalent to fresh-water cod."

Second, we may note that of the names applied on grounds of old association, perhaps the most patent is that of the adoption of the name brook-trout, or speckled trout, for a fish which is not in a strict scientific sense a true trout at all; but, as already pointed out, is really a charr, and closely allied to species of charr found somewhat locally in lakes in Great Britain and certain European countries. The fish which occurs in certain Scottish, Welsh and Cumberland lakes in the British Isles, and is most closely related to our brook trout, is not called a trout at all, but is known as a charr. The genuine brook trout, the *Salmo fario* is a true *Salmo*, and not to be confused with any member of the genus *Salvelinus*, or charrs. In size and in many features our *Salvelinus fontinalis* or brook trout, recalls the trout of the old world, and the earliest English, Scottish and Irish settlers liked to think that the streams in the new land, like those in the old, were trout streams. 'When the New England States were first peopled from Britain,' said the late Dr. Francis Day, "this fish was called a "trout" for but few of the early emigrants could have had an opportunity of observing a "charr," and they gave it the name that most

SESSIONAL PAPER No. 22

nearly reminded them of a form which existed in the mother country.' Thus they habitually spoke of the Canadian charr as the brock trout or speckled trout. This was done deliberately and with the knowledge that this trout, like fish in the lakes and streams of North America, was not the same as the trout of English rivers and Scottish burns. Dr. Jordan has on many occasions pointed out with singular clearness the main points in which the American brook trout or charr differs from the original brook trout of Europe. Referring to the almost unavoidable blunder of the white settlers on this continent, he says:—'Finding no real trout with black spots and large scales in the rivers, and having forgotten the name of "charr," they gave to this fish the name of trout, or speckled trout, or brook trout, and in spite of the fact that in reality it is not a trout but a charr, the name of brook trout is likely to adhere for ever to the *Salvelinus fontinalis*. Real trout there are none on our Atlantic Coast, and salmon trout is likewise wanting, but the name salmon trout is often given to brook trout, or charr, which has run out into the sea; and it is also often given to another charr, a very large, coarse species, in which the red spots have faded out to a cream colour, which is found in all the lakes from Alaska to Maine, across the northern half of our continent. This is the great lake trout (*Salvelinus namaycush*), and except for its large size and comparative coarseness, it would never be mistaken either for trout or salmon. The name salmon trout is wholly inapplicable to it.'

In a very clear and luminous way this eminent authority thus compares the species to which the names 'trout,' 'salmon,' and 'charr,' were originally applied. He further says:—'In order to get a better idea of the proper application of the various vernacular names that are used in America, it is necessary to go back to Europe, the source from which these names have been drawn. First, we have a large fish, common in the salt waters of northern Europe, spending most of its life near the shores in regions where the water is cold and clear, and ascending the rivers in the spring when the high water comes down from the mountains, going through the rapids with great force, leaping cataraacts, and finally casting its spawn on the gravelly bed of a small stream. This was known to the Latin writers as *Salmo*, the word coming from *salio*, which means "to leap," and in the different languages which are derived from the Latin having as its names some form of the word "salmon." The scientific name of this fish is *Salmo salar*. Very similar to the salmon in all technical respects, like it having black spots over the surface of the body and rather large silvery scales, is a smaller fish which rarely descends to the sea, and makes its home in the rivers and lakes throughout northern and central Europe. This fish was known by the name of *Fario* to the old Latin writers, the most important of whom, in this regard, was Ausonius, who wrote feelingly and poetically of the fishes of the River Moselle. From the Latin word "fario" comes the German name "forelle." This fish is the trout of all English writers, the trout of Izaak Walton, and the scientific name is *Salmo fario*.' Professor Jordan also very lucidly refers to the species on this continent, which received the European names, saying:—In the lakes of Greenland and the eastern part of British America, the European charr (*Salvelinus alpinus*) is as abundant as it is in Europe—a fact which has been only lately made manifest, and even yet there is some question whether some of these which are found in the lakes in New Hampshire have not some time or other been brought over and planted there from Europe.

In the lakes of Maine, and on the north, there is still another charr, smaller and finer than the European one, the Blue-back trout of the Rangley Lakes, known as *Salvelinus oquassa*.

Thus, instead of one of the salmon, salmon trout, trout, and charr, of Europe, we have in the Eastern States the same salmon, the same charr, and three other charrs, but neither the trout nor the salmon trout.

In coming to the Pacific coast, the settlers of California brought the names with them from the East, but found none of the fishes to which they had been accustomed. Salmon they found, similar in habits and in value as food, but many of them larger, finer, and vastly more abundant than any of the salmon of Europe. California salmon differ from all the rest of the salmon family, in the fact that the number of rays in the anal fin is from fourteen to twenty, while in all the salmon and trout on the other side of the Atlantic this fin contains no more than nine or ten rays. The Pacific coast

salmon have also an increased number of branchiostegals, an increased number of gill-rakers, and a much larger number of pyloric cœca, or glands, about the stomach. They are, therefore, in strictness, not salmon at all, but something more intensely salmon than the salmon of Europe itself really is. They have therefore been placed in another genus known as *Oncorhynchus*. For the lack of any other common name they are always spoken of and will always be canned, as long as the canning industry lasts, under the name of Salmon. The Chinook name, *Quinnat*, was early applied to them, and if we feel the need of some other name to distinguish them from real salmon we may call the Pacific coast salmon Quinnat, or Quinnat salmon. These species all live in the ocean, ascend the rivers in the spring and summer, spawn in fresh water in the fall, the young, as soon as they are able to swim, floating tail foremost down the river and growing rapidly as soon as they reach the ocean and the peculiar ocean food. There are five species of these Quinnats, varying in size, colour, &c., and differing especially in the quality of the flesh: but all of the same genus.

Besides the salmon, the settlers of California found in the brooks an abundance of what they called trout. These are *black-spotted*, silverscaled, and in every way *closely resemble* the trout of Europe, and are wholly unlike the charr, or so-called trout of the Eastern States. The name trout by rights belongs to these fishes, and they are placed in the genus *Salmo*. A *charr* is also found in Pacific waters, but as the name 'charr' had been wholly forgotten by our ancestors, they could only call this, like the others, a trout.

A third mode of naming and one which has led to some confusion is that of the innocent application of names, which appear to the ordinary mind appropriate, but are in reality not suitable and not correct. Thus the term lake-herring is usually given by fishermen and dealers to fishes (of several species) which are really whitefishes, and not herring at all. The so-called herring of the great lakes—as also the 'long-jaw' (*Coregonus hoyi*) and the 'blue fin' (*C. nigripinnis*), all belong to the same group as the true whitefish, indeed the term lesser whitefishes should be applied to these species, which have all the characters of true salmonoids, and not one feature, except size and silvery brightness, to entitle them to be called clupeoids or herrings. In other words the term herring is in the highest degree erroneous and misleading. A similar case is that of the so-called shad in many inland waters of Canada. The process is, however, the reverse of that just referred to. The shad is a true clupeoid—a typical member of the herring family, though larger than the familiar *Clupea harengus* and reaching a weight of no less than four to six pounds—the average being one or two pounds. The name has long been applied or mis-applied to certain varieties of true whitefish in some localities. Thus in Lake Champlain and Memphremagog the fishermen for years have made catches of what they called shad, but which proved to be true whitefish, of the smaller elongated species known as *Coregonus quadrilateralis*. Official statistics have long recorded catches of shad in these inland lakes of Eastern Canada; but they have been demonstrated to be really catches of whitefish.* These catches, it may be added, were made in November, the close season for whitefish; but being regarded as shad, the law was never applied, and the fish were thus destroyed in the November spawning season. The term shad is misapplied in Lake Ontario—being there used to signify a small and worthless clupeoid, which dies mysteriously in vast schools every summer. Mr. A. Nelson Cheney, State Fish Culturist for the state of New York, writes of this fish 'It is abundant along the Atlantic coast, entering streams to spawn, and also found in the interior lakes of this state, where it is scientifically known as variety *lacustris*. The name saw-belly is given to it in Lake Ontario and the St. Lawrence, and, I think, in Lake Cayuga, where it swarms and where great multitudes die every year in early summer. From the best information obtainable the fish die from a change in the temperature of the water. Coming from the deep cold water of the bottom into the warm surface water, heated by the summer sun, they make a spasmodic movement, turn over and die in such quantities that the surface of the water is covered with them, and it is sometimes a problem to get rid of their decayed and decaying bodies.' They are very generally called shad along the Canadian shores of Lake Ontario, and the name is of course wholly inappropriate, as is also a name frequently

*Dr. Hart Merriam pointed out in 1883 that the shad in Lake Champlain were really whitefish. Bull. U. S. F. Comm., Vol. IV., p. 287.

SESSIONAL PAPER No. 22

applied to these small landlocked gaspereau, viz., menhaden, which name belongs to a very different member of the herring family and should be confined to *Brevoortia tyrannus*. The term shad is also wrongly applied to another clupeoid *Dorosoma cepedianum* indeed, excepting the somewhat absurd name 'Hairy-back,' the four or five popular names which are given to that species all imply that it is a shad—the terms in common use being : gizzard shad, hickory shad, mud shad, and white-eyed shad, whereas it is not a shad at all ; but a large-sized member of the herring group, having a hard muscular stomach, deep body, small head, and a long hair-like projection from the hind border of the dorsal fin, really the last bony ray of that fin. In certain rivers in Louisiana, in which Dr. Evermann stated that there was no evidence of the existence of any species of true shad (*Alosa*), a herring-like species *Signalosa atchafalayæ* is called shad by all the fishermen. The term 'whiting' which is really the popular name of a European fish closely related to the haddock and cod, and named *Gadus merlangus*, is applied along the Canadian shore to a widely different fish, viz., the silver hake (*Merluccius bilinearis*) which resembles the true whiting in scarcely a single prominent feature. On the Pacific coast the name whiting is similarly applied to *Merluccius productus*, while in New York State the whitefish (*Coregonus*) is known as the whiting in many localities. A similar error was made in the case of *Menticirrhus Americanus* and *Menticirrhus littoralis* neither of which fishes are in any way allied to the Gadidæ, to one of which the name whiting has been for centuries applied.

The term shad-waiter, though an erroneous name, is not seriously confusing. It has been adopted in many lakes in Eastern Canada for the small whitefish *Coregonus quadrilateralis*, for which the name shad has been erroneously chosen in other places as mentioned above. Along the Atlantic coast the terms horse mackerel and mackerel shark are applied to the tunny (*Thynnus thynnus*) both names, having this element of justification that the tunny is a gigantic and voracious member of the family *Scombridæ*, or the mackerels, but the horse mackerel is in reality *Caranx trachurus* the scad or horse-mackerel, represented on our shores by *Caranx hippos* or *Caranx crysos*, and the mackerel shark is *Lamna cornubica*—known also as the porbeagle shark.

There is less objection to the use of the word loach or loche for the burbot, or fresh-water ling, also called the cusk, and the name is confined mainly to the province of Quebec,* no doubt brought by the early French immigrants, who were familiar with a small eel-like fish, the groundling or stone-loach (*Nemacheilus barbatula*) which Dr. Day states is known as *la loche franche* in France. It is a peculiar specialised little fish, lurking at the bottom of stony brooks and rivers, and rarely exceeding five inches in length. The burbot, at a cursory glance, recalls the brown, slimy, eel-like European loach, and *la loche* was a name instinctively chosen, though, as stated on a later page, the Canadian fish rejoices in no less than fifteen or sixteen more or less inappropriate names ; perhaps the most absurd and unsuitable for this ugly, slimy, dull-coloured, and inactive fish, is the term trout, which in some localities in the United States has been applied to it. Dr. Jordan gives the name of Alekey trout, as one of the popular names of this voracious fresh-water cod, or rather ling, (*Lota maculosa*) which some old authority, it is recorded, pronounced to be a hybrid between an eel and a trout.

A fourth mode of false nomenclature is that of the adoption of names already appropriated and universally accepted for certain fish and their application to other wholly different fish ; some fancied justification being found in the habits, the form or the teeth of the fish. Thus the word 'pike' has become venerable as the distinguishing name for the Esocidæ, yet the term pike, usually qualified by the word 'yellow,' or 'blue,' is very generally applied to fishes more closely related to the perch family, indeed the long-used scientific name *Lucio-perca*, or pike-perch, was an appropriate and descriptive one. In Canada these fish, of which there are at least three species in the Dominion, are called pickerel, and the yellow species, or American Sandre, (*Stizostedium vitreum*), is called doré in Quebec, and indeed amongst French-Canadians generally. The sauger, or Canadian sandre, also called blue pickerel (*Stizostedium canadense*) is often called blue pike by United States fishermen and sportsmen, who also distinguish both species as wall-eyed pike. Similar confusion has arisen in relation to the word 'pickerel,'

*The name loach or loche, is in use in Alaska.

which in Canada always signifies the doré, sauger, sandre, or pikeperch; but in the United States means a small species (or small specimens in some cases) of the long-nosed pike (*Lucius*) i.e. members of the *Esox* family. Mr. A. N. Cheney, whom I have already had reason to quote, has written very aptly upon this question of the confusion of the names 'pike,' 'pickerel,' &c., and I venture to give his words at length:— 'In New York State the pike, *Lucius lucius*, is almost universally called pickerel, although some concede so much as to call it great northern pike. If the word pike alone is used, it generally means the pike-perch or wall-eyed pike. I have tried over and over to separate the pike, the pickerel and the pike-perch by describing them, and the reason why I refer again to the "pickerel" is that I recently looked over a lot of fish applications made to the Forest, Fish and Game Commission in which "pickerel" were asked for, and with one exception I concluded that the applicant really wished the pike. The State does not propagate any of the pike family, but the maskinonge; but it does propagate the pike-perch, and it has distributed the pike and the pickerel on occasions, but always adult fish. Great care is exercised when pike or pickerel are distributed in State waters to place them only where they will do no harm to other fish, and that means that unless the pike or pickerel are already in the water the State will not furnish them for planting. Pike and pickerel for distribution are procured only when netting inland lakes for other fish, and this year none of the pike tribe were taken. They can be hatched artificially, and have been in Germany, but it is not necessary, for they are perhaps the most prolific of the fresh-water fishes, and being spring spawners they require but a few days for their eggs to hatch, and if they have half a chance during the breeding season fair angling will never materially reduce their numbers in a pond or lake, but they have always been the mark for the man with spear and gun when they run into the shallows to spawn. The late Count von dem Borne told me of propagating the pike and the black bass in his fishery in Germany, and how the pike fry worked through into the black bass pond and lived on the bass fry before he knew of the mingling of the fishes. I have already given the details in 'Forest and Stream,' but from memory I will say that at five months from hatching the pike that had been living on black bass fry weighed something over two pounds, and were seventeen inches long.'

A fifth and most unjustifiable mode of affixing names to North American fish is that which can only be described as the thoughtless and wilful misapplication of names either already appropriated for wholly different fish, or newly devised names without appropriateness or utility. It is surprising how many cases may be found of this erratic and harmful, and even culpable, mode of choosing names for fishes. Thus the term 'salmon,' or usually 'jack-salmon,' is used on the Mississippi River for the Canadian pickerel or the wall-eyed pike. The editor of the *American Angler* (June, 1896) stated that great attention has been paid 'by the State Fish Commissioner of that section (the county adjacent to St. Louis) to the propagation of the pike-perch locally called the jack-salmon,' while in Pennsylvania it is called the 'Susquehanna salmon.' Similarly the word 'trout' is applied to the large-mouthed black-bass, often called Oswego bass in Florida and most of the southern states. It is there also applied to the sea bass, probably the striped bass. Frequently the name 'green trout' is given to the black bass as though to reconcile the sportsmen to the misuse of the term, for a green trout could hardly be mistaken by the least observant for the silvery, richly-tinted speckled beauty of northern waters. The black bass, however, endures much maltreatment in the way of inappropriate naming, for the *American Angler* (June, 1892) p. 419, tells us that 'there is no fish, not excepting the chameleon brook trout, that shows greater variation than the black bass of both species known as green bass, yellow bass, moss bass, black perch, yellow perch, black trout, green trout, &c. This much maltreated fish bears in the Neuse River, North Carolina, the meaningless and foolish name 'Welshman,' when for the use of intelligent people the name black bass is available, and in most civilized regions it is the name generally adopted. Similarly the name 'Dutchman' is applied to the English trout or brown trout in the Beaver-kill waters. Again it is difficult to see what rational ground there can be for applying the name trout to a member of the carp family, really a chub, as is the case with (*Mylocheilus caurinus*) the Columbia River chub. Great numbers of these small inferior fish are

SESSIONAL PAPER No. 22

caught and called trout almost universally by the local people. It is said that they 'bite very quickly and when they take them off the hook they find their stomachs full of salmon eggs.' Equally unjustifiable is the custom of calling another cyprinoid, the small mud-minnow, *Umbra lima*, by the name dog-fish—a term applied most commonly to certain small members of the shark tribe, but also given to the Bow-fin or Mudfish, *Amia calva*. The bow-fin also bears the name 'lawyer,' a distinction which had already been bestowed on Lake Ontario and Lake Michigan waters to the burbot or freshwater ling.

A sixth mode of naming fish to which there is every reason to object is that of putting in circulation a new name in place of an old and universally known name for some comparatively trivial and unscientific reason. The most flagrant case of this evil course is found in the name very often given to the original brook trout or spotted trout of European streams and rivers (*Salmo fario*). It is by many United States authorities called Von Behr trout, a name wholly unknown in any other country, and wholly inappropriate. Even so eminent an authority as Dr. Jordan speaks of *Salmo fario* as the Von Behr or brown trout, neither of which names are commonly applied to it in any country in which the fish is indigenous. Mr. Livingston Stone, in a paper on American Fish Culture, two or three years ago, thus spoke of the reason for calling the common brook trout of Europe by the name of a German fish-culturist, and urges some considerations in order to justify the policy. He says:—

'It was the writer's privilege to carry on a delightful correspondence with Herr von Behr for several years. Dropping all official forms and, indeed, all formality whatever, his letters were earnest, confidential, and full of enthusiasm. They expressed the same love and admiration for Professor Baird that Americans felt for him at home, and never lacked in expressions of his great admiration of American fish-culture. They also record his sad domestic bereavements, and told how, after the loss of his three sons, he had resolved to devote the remainder of his life to the cause of fish-culture in Germany. I am aware that much criticism has been expressed because Von Behr's name has been given by Americans to a European trout since its introduction into this country; but whatever may be said of the judiciousness of the act, no one can deny that it was a fitting compliment to a man who richly deserved the honour, nor can any one deny that it reflects credit on the kindly feeling which sought in this way to recognize America's indebtedness to Von Behr, and to perpetuate in America the name of the distinguished German fish-culturist.'

A parallel case occurred in Canada, some years ago, when an effort was made to perpetuate the name of a pioneer fish-culturist of the Dominion viz.:—the late Mr. S. Wilmot. The name Wilmot's salmon was applied to the salmon which formerly occurred in some abundance in Lake Ontario; but is now practically extinct. The fish, it has been agreed, differed in no structural respect from the sea salmon (*Salmo salar*) and the name Wilmot's salmon never attained any currency and rightly so. As a matter of fact records show that these Lake Ontario salmon were prior to the middle of the present century extremely abundant in the lake. So late as 1856, large schools still occurred, but about 1865 it is reported that only a scanty remnant existed, destructive poaching, especially merciless slaughter on the spawning grounds, chiefly small shallow creeks and streams, had decimated them. In 1865, says an official report, the scanty remnant referred to were snatched from extinction through the efforts of the Fishery Department. This remnant was afterwards utilized by Mr. Wilmot, who conceived the idea of restocking the stream by artificial reproduction. His initial experiments, purely of an individual character, were prosecuted during two years under much outside difficulty and at very considerable personal labour and expense. They were, however, successful, establishing the important fact that salmon eggs could be hatched out there and the young fish reared through proper means and intelligent care. Aided to a very limited extent in the following years by the government, Mr. Wilmot persevered, and he was able to exhibit upwards of 140,000 well shapen, healthy and active salmon fry from three-fourths of an inch to one and a half inches long, and fully capable of being fed and reared to that stage of vigour and growth when naturally they would emigrate from their native stream and return as adolescent salmon. It was officially stated that these fry were no hybrids—no doubtful or inferior members of the salmon family—but the

thorough progeny of the true salmon (*Salmo salar*) which form so valuable a product of the sea-coast and tidal river fishings in other parts of the Dominion. 'Their identity is an ascertained certainty,' says the official report, 'in spite of a doubt which is known to exist in the minds of many persons, and demonstrating that the commercial value of fish so bred renders the subject of its increased production worthy of greater attention. Grilse, or in other words, two-year-old salmon, of the experimental hatching of 1866, having revisited the creek in the fall of 1868, are actual progenitors of part of the present large hatch of salmon fry. The female grilse is not known to propagate on her first migration from sea, but the male does. The few full grown stock fish, male and female, which were last autumn accompanied by the large number of grilse returning to the stream, were rendered available towards supplying the fecundated ova laid in the hatching troughs.'

The hatching troughs referred to were those in the private establishment inaugurated by the late Mr. Wilmot, in which he carried on for some years fish culture before the Dominion government took up the work, when the buildings were transferred to the Department of Marine and Fisheries, and fish-breeding has been carried on there until the present time. No doubt this special effort on the part of a private individual, gave that individual, in the eyes of some people, the right to confer his own name upon them; but the principle is one which has no claim to approval on general grounds, and there is on scientific grounds every reason for strongly condemning it. The name *Salmo Wilmoti* is one, therefore, which could not by any means be justified or gain currency. That vigorous and enthusiastic fish authority, the late Fred Mather, expressed himself thus clearly on this application of personal names to fish. 'I find frequent reference,' he wrote, 'to German trout, and I wish to protest against the use of that name for the brown trout. . . . the United States Fish Commissioner has seen fit to ignore the name brown trout, which, as the original importer, I have the right to give, and has called it "Von Behr trout," a name that will never stick.' The right claimed by the importer of a foreign fish, here urged, may be questioned; but it is certain that so long as the name Von Behr trout is used by fishery authorities on this western continent, their brethren in other lands will not know to what fish they refer. Certainly the name will never be recognized or adopted in any other country on the face of the earth. Quite a number of fishery experts have felt the inappropriateness which the selection of an unknown name for a well-known fish possesses, and the hindrance it is to clearness and intelligibility, and Mr. A. N. Cheney thus strongly places himself on record in a recent issue of *Forest and Stream*:

'For years I have inveighed against the use of the term German brown trout, because it was absolutely improper. As well call our native brook trout New York brook trout or Connecticut brook trout, because they happened to come from either of the states named. Over and over I have written that the brown trout is the common brook trout of Europe. In Germany it is called brook trout and in Great Britain it is called brown trout. We cannot adopt the translation of the German common name, as we have a brook trout of our own, but we can call it by its English common name, brown trout, the trout of Izaak Walton, and the first brown trout eggs that ever came to this country came from England, though the first eggs that came here to a State or national hatchery came from Germany, and the name German brown trout has stuck to the fish in one of the State hatcheries ever since. The State of New York made a fish exhibit at the State Fair in Syracuse, and when I reached the building where the fish were and read over one of the tanks, "German Brown Trout," I felt I was wounded in the house of my friends, as well as stabbed in my vitals. It required but two seconds to pull down the cards bearing this misinformation, and it required at least five minutes talk to the man who prepared the cards and put them over the tanks, and the tail end of the talk was that such an offence should be deemed just cause for the dismissal of the offender from the service of the State.'

The same authority just quoted added great force to his argument, if any additional force were needed, in the considerations which he urged in a communication to the *New York Sun* when he pointed out that the fish in question is the common brook trout of Europe—Izaak Walton's trout, native to the waters of Great Britain and the Continent, introduced into the United States, New Zealand, South Africa, India, &c. In Ger-

SESSIONAL PAPER No. 22

many the fish is called *Bachforelle* (brook trout). Dr. Day, in 'British and Irish Salmonidæ,' persistently writes it down brook trout; but as we have a brook trout of our own we cannot adopt the translation of the German name which Day seems to prefer. In England the fish is generally called the common trout, although it is sometimes called by other names. This is particularly true in Scotland. The name German trout became attached to the European trout from the fact that the first eggs of this species sent to the country for a public hatching station were presented to the United States Fish Commission by Dr. von Behr, President of the German Fisheries Association, and were taken from German waters, although a private fish breeder in Massachusetts had previously imported brown trout eggs from England. The United States Fish Commission, out of courtesy to Dr. von Behr, named the fish von Behr trout, but in New York State the Fisheries, Game and Forest Commission adhere to the English name brown trout, and under this name it is hatched and distributed in some of the public waters of the state.'

Lastly, there is the method, too commonly adopted, of conferring a great variety of names upon one fish, instead of adhering to a single, generally accepted name. There may be an element of appropriateness in each of the names as in the term 'smelt' which is applied on many lakes in New York State to a lesser whitefish, whose specific distinctiveness was first noticed by that able and gifted fishery expert, Dr. H. M. Smith. Dr. Smith called it *Coregonus osmeriformis*, (now called *Argyrosomus osmeriformis*) the specific name having reference to the smelt-like character of its external appearance. Both the smelt and this lesser whitefish belong to the same family (*Salmonidæ*), and the misnaming is certainly not so outrageous as calling the whitefish a bass, a practice on some waters in New York State: the term 'Otsego Bass' being most unjustifiably applied to the lake whitefish. The name smelt is also given to *Notropis hudsonius*, a widely distributed minnow, ranging from Lake Superior to South Carolina. So also the name 'Mullet,' which really belongs to a family having most of the characters of the perch, viz., the *Mugilidæ* (applied likewise to the Surmullets or *Mullidæ*) has been conferred in many localities to members of the carp family, from which they wholly differ. The mullets are marine fishes, though some of them come into brackish water. The chub-sucker (*Erimyzon sucetta*) is called mullet in North Carolina, while in Ontario the *Moxostomæ*, or large scaled suckers, are called mullets, e.g. white mullet, *M. papillosum*; blue mullet, *M. coregonus*; jumping mullet, *M. cervinum*, carp mullet, *M. carpio*, or simply mullet, *M. aureolum*. There is probably no case, however, which for variety of popular names can excel that fresh-water Gadoid, *Lota maculosa*, which rejoices in at least fifteen distinct names. It is called the burbot, the fresh-water ling, (to distinguish it from the sea-ling), the losh or loche in Quebec and Alaska, the eel-pout in Eastern Canada and some Eastern States, the dog-fish in Lake Erie, the 'chub eel' in Mohawk River, New York State; the 'fresh-water cusk' in St. John River, N.B.; 'the ling and lawyer' in Lakes Ontario and Michigan; the 'lake cusk,' and 'fresh-water cod,' of Lake Winnipigoegee; the 'maria' in Lake Winnipeg; the 'methy,' by the Cree Indians, and 'eel-pout' in many districts, and the 'mathemeg' in some western areas. It is also called 'spotted burbot,' but, as Professor Ramsay Wright some years ago suggested, the name American burbot is at once most distinctive and appropriate and should supplant all other names. Only one species is recognized by experts, though a small species was at one time named and distinguished as *Lota compressa*, the lesser eel-pout. Amongst the French Canadians the same lack of uniformity exists for *M. Montpetit* points out that 'Les Canadiens Français de Montreal appellent improprement ce poisson la loche; à Québec on lui donne tantôt le nom de queue d'anguille, tantôt celui de bar-bue.'

If great variations obtain regarding the naming or misnaming of this fish, a corresponding diversity of opinion exists regarding its edible qualities. At a remote Hudson Bay post, in the Canadian North-west, I found that the flesh was regarded as poisonous, indeed, cases of poisoning after Indians and employees of the post had eaten the fish were mentioned, and it was pointed out that even the dogs would not eat it. The dogs are usually fed on the excellent whitefish and decline being put off with inferior fare, and it is a fact pointed out by various explorers that the dogs of the North-west, used in the dog-trains, refuse to eat the burbot. I found, however, at another Hudson

Bay post, that the fish was often eaten and was regarded as most excellent, no ill effects having been noticed. Belonging as it does to the cod family, it should be an excellent fish for the table, like its near relatives the cod, haddock and hake. In one of the lakes in New York State, (Lake Winnipiseogee) it is pronounced equal to the whitefish for table use, and the liver is generally considered a rare delicacy.

Dr. Richardson (*Fauna Boreali Americana*) is recorded to have said that 'the flesh of the fresh-water cusk is firm, white, and of good flavour; the liver and roe are considered delicacies, when well-bruised and mixed with a little flour, the roe can be baked into very good biscuits, used in the fur countries as tea-bread.' Professor Brown Goode spoke of it as a very excellent fish, especially for boiling, though Dr. T. H. Bean pointed out that apart from the liver, the fish is not esteemed in the Great Lake region and northward, but in the rivers of Montana the burbot is in great favour.

Perhaps the name 'minnow' is more generally applied, or misapplied than any other common popular term in use. When it is remembered that the term 'minnow, may on scientific and popular grounds be justifiably applied to small species of Pimphales, of which there are at least four kinds, of Leuciscus, twenty-two species; of Notropis, one hundred and three species; of Fundulus, forty-one species; of Cyprinodon, eleven species; of Gambusia, nine species, and of Gasterosteidae at least fourteen species or varieties, or a total of just over two hundred distinct varieties of small fishes, it can be imagined how much uncertainty and confusion is bound to arise when the name minnow instead of being confined to this somewhat numerous group of seven genera, is indiscriminately applied to any small fish if of a minnow-like appearance, whether the young of a well-known large species, or the adult of some small species. Indeed in my own experience I have heard characterized as minnows the young of salmon (that is the parr stage) of black bass, of pike, pike-perch or pickerel, of whitefish and of many other familiar kinds in immature and young stages.

More than one word is scarcely called for on the matter of traders' names or commercial names for fish. Such names are not, strictly speaking, popular names at all, and as a rule are confined to the circle of traders which have adopted them. They do not mislead the public to any great extent, though they often vitiate official statistical records, except in such cases as that of the small immature herrings caught in the Bay of Fundy and along the Atlantic coast, and used chiefly for canning purposes. These small fish, put up in oil and other liquids, are sent into the markets as sardines. They are not true sardines, but fishermen, dealers and local inhabitants never refer to them as herring. The traps or weirs are called sardine weirs; the nets, sardine nets; the fishermen, sardine fishermen; and it would be difficult to get into common use any other name than that universally adopted along the shores, viz., sardine. As already pointed out, the danger of such misnomers is that in official reports and statistical returns the information collected may often be misleading unless special care be taken to discriminate between an erroneous local or trade name, and the correct and distinctive name which is in general use. It is plain that if it were open to any one at will to use, say, the term 'dog' when referring to the horse, and when speaking of cats use the term 'bears,' no one would know what was meant, for not only would confusion result, but far worse, viz.: the spreading of misleading and erroneous statements. Yet, this is precisely what has taken place all over North America in regard to fish. Well-known names have been misapplied and misused, the same name has been given to fishes placed by naturalists wide apart, and on the other hand a variety of names, really belonging to diverse fishes have been applied to one fish.

As Dr. W. C. Kendall has pointed out in a paper on the fresh water fishes of Washington County, Maine, published in the Bulletin of the U.S. Fish Commission, 1894, vol. XIV., p. 44, that local names are as a rule far from clear, and he gives such apt illustrations from the part of Maine referred to that I venture to quote the examples which he gives: 'Local names,' he says, 'are always more or less confusing, and they are especially so in many instances in Maine, where distinct species in neighboring localities are often known by the same name. The name "chub" is applied indiscriminately to the larger fishes of the family *Cyprinidae*; "young chubs" or "shiners" to the intermediate sizes, and "minnies" to the young *Cyprinidae* and to the *Cyprinodontidae*. The catfish *Ameiurus nebulosus*, is known generally as "hornpout," as also in some places in stickle-

SESSIONAL PAPER No. 22

backs *Pygosteus*, *Gastrosteus*, and *Apeltes*. *Catostomus teres* is commonly designated as "sucker." *Semotilus bullaris* is widely known as "chub;" but the adult *Fundulus heteroclitis*, in places along the coast, are likewise called "chub," and the young of the same species "minny." *Salvelinus fontinalis* is everywhere recognized by the names "trout," "brook trout," and "speckled trout," *Salvelinus namaycush* is known as "togue," "lake trout," or "salmon trout;" *Salmo salar sebago* as landlocked salmon and "salmon trout." The brook-trout when large, also has sometimes been misnamed salmon-trout. *Salmo salar* is commonly known as "salmon" or "sea salmon."

If the use of popular names is to be anything else than a hindrance and a false guide, some uniform method of popular nomenclature will require to be adopted. The adoption of a cast-iron rule of priority might, as in the case of scientific nomenclature in ichthyology, result in the suppression of generally accepted and well-known descriptive names and the unearthing of questionable treasures in the shape of uncouth and unknown names from the lumber pile of musty antiquarian ichthyological records. Nomenclature should be a help, not a hindrance, and its terms as far as possible should be descriptive and convey information instead, as is too often the case, of mystifying and beclouding the intelligent student and inquirer.

III.

ACCLIMATIZATION OF FISH, FRESHWATER AND MARINE.

BY PROFESSOR EDWARD E. PRINCE, DOMINION COMMISSIONER OF FISHERIES, OTTAWA.

Fishes are frequently divided into freshwater and salt-water species, though there are some kinds, like the salmon, shad and eel, which occupy a kind of neutral position; and have the habit of spending part of their time in fresh water and part in the sea. Those which ascend rivers for spawning purposes, their young brood descending at a sufficiently advanced age to the ocean, are distinguished as "anadromous" or "ascending" species, while those which have their habitat in fresh water lakes and rivers, and migrate to the sea for spawning purposes, are known as "catadromous." But while these distinguishing names apply accurately enough on the whole, there is abundant evidence that numerous species, which are essentially marine species and neither anadromous nor catadromous, are able to live in fresh water and *vice versa*.

The power of endurance which enables a marine fish to live and grow, and even reproduce in fresh water, or in brackish water, is in some species so remarkable as to open up to the fish-culturist possibilities which hitherto have received little or no attention. If waters remote from the sea can be stocked with fine species of fish, normally inhabiting salt-water, the possibility of conferring immense benefits upon the public becomes apparent. The introduction of new species of fish into various countries, as for example the brook trout of this country into England has been a great success. Plants and trees in the same way have been distributed. I had for many years been impressed with the remarkable adaptability to new and unaccustomed conditions of certain Canadian fishes and it had occurred to me that some of the so-called alkaline or saline lakes—many of considerable extent—in the North-west Territories, might be stocked with fish capable of enduring profound changes of environment. I had a long conversation in 1893 with Sir John Schultz upon the subject, and as a result, Sir John, at that time Lieutenant-Governor of Manitoba, arranged for a discussion of the matter with the Rev. Father Lacombe. I therefore arranged a scheme for introducing certain species of fishes, new to western waters, into the barren and unpromising lakes in the west. Various circumstances interfered with the realization of the plan which I devised in detail; but in 1896 an attempt was made, to which I referred in my report upon fish-culture in that year (29th Am. Rep. Dep. Mar. and Fisheries, 1896, pp. 290 and 291). The frost-fish or tom-cod on account of its hardy nature, habits of spawning and excellence as a table fish, appeared specially suited for transference to the barren western lakes, where the conditions are somewhat unfavourable to most kinds of edible fish.

Few people have any idea of the number of species, which can be safely transferred from their usual habitat to conditions wholly different in many respects. To the fish-culturist, whose work includes the introduction of valuable species, in adult or immature stages, into new waters, as much as the hatching and rearing of the usual kinds, the fact is of profound importance.

That certain marine shell-fish are able to survive removal from their usual surroundings has long been known. In a paper read Nov. 19, 1825, to the Wernerian Society of Edinburgh, Mr. Henry Witham described a bed of sea-cockles (*Cardium edule*) as existing in a peat moss in Yorkshire at a distance of no less than 40 miles from the sea. The peat-moss was about two miles from Greta bridge, and not many miles from the river Tees. The bed of cockles, which were living on the sandy bottom of a channel or drain passing through the peat-moss, had existed for a long period, indeed the adjacent

SESSIONAL PAPER No. 22

farm was called Cocklesbury in allusion to the occurrence of the shell-fish. Specimens of the cockles were exhibited at the meeting of the Wernerian Society, and they differed in no respect from those occurring on the vast beds of the estuary of the Tees, excepting that on tasting them they were less distinctly salt in flavour. Over a hundred years earlier Mr. John Brand, in his book entitled 'A Brief Description of Orkney, Zetland, Caithness, &c.' (Edinburgh, 1701,) referred to the occurrence of living cockles in the fields more than a mile from the sea. When ploughing the fields, cockles were turned up in numbers and were eaten. Of this remarkable occurrence Mr. Brand wrote:— 'How these shell-fishes came there, and should be fed at such a distance from their ordinary element, I cannot know, if they have not been cast upon land by a violent storm, much of the ground of this parish, especially what they labour, lying very low, and the sea hath been observed in such storms both to cast out stones and fishes; or if these cockles have been found in some deep furrow, from which to the sea there hath been a conveyance by some small stream, upon which the sea hath flowed in stream tides, especially when there is also some storm blowing. If only shells were found such as oysters and the like, the marvel would not be great, seeing such are found upon the tops of high mountains, at a greater distance from the sea, which, in all probability, have been there since the universal deluge; but that any shell-fish should be found at some distance from the sea, and fit for use, is somewhat wonderful and astonishing.' Specimens of the sea-whelk, *Buccinum undatum*, have been found in Shetland, living on the margin of a freshwater lake (on the island of Yell) about a mile and a half from the sea. The shells were somewhat thinner in texture than those found on the adjacent rocky coast, and their coloration differs markedly, being very distinctly banded. Many showed the tip fractured, lending support to the theory that crows or water fowl had carried them to the locality, but that they were found living in fresh water, and according to competent observers differed from the marine forms in certain features seemed to show that they had long lived in their new surroundings. The lake had an extremely small outlet emptying by a minute rivulet into the sea, and it was practically unaffected by the tides. The well known Scottish geologist, the late Dr. John MacCulloch, suggests to a resident on the Isle of Guernsey, viz., Mr. Arnold, that experiments, in the acclimatization of many species of marine animals, might be tried in a closed pond about four acres in extent, and separated from the sea only by an embankment. The inflow of fresh water (non-saline that is to say) was very deficient in summer, but abundant in winter, hence it was nearly fresh in winter, very salt in summer and brackish in varying degrees at intermediate periods. The experiment which was tried, was not therefore conclusive in establishing the permanence of the adaptability of the creatures tested, to fresh-water conditions, yet a variety of sea fishes as well as crabs, shrimps, oysters, and mussels, survived in health and vitality. The test was, however, not decisive as to the possibility of keeping these creatures alive at a distance from the sea and in water which was invariably fresh. That oysters can endure transference to water, not merely brackish but almost destitute of salinity, has been demonstrated. They do not breed under such conditions, nor do they maintain a fully healthy state, though they may fatten and increase in size.

From an economic standpoint the acclimatization in fresh water of fishes wholly or partially marine is, however, of prime importance. That a fish, like the salmon, which habitually spends much of its life distant from the sea, should either naturally or under circumstances artificially devised, take to a purely fresh water existence is not surprising. The ouananiche or land-locked-salmon of eastern Canadian waters is a familiar example. No doubt the land-locked species of salmon found in certain lakes in Maine, U. S. A., and in Chamcook and other lakes in New Brunswick, has acquired the habit of remaining permanently in fresh water, owing, as in the case also of Lake St. John in Quebec, to certain physical difficulties which may have at one time existed in the way of admitting free migration to and from the sea. The experiment has been tried of retaining the fry of sea-salmon in fresh water ponds and lakes with a view of originating a non-seagoing variety, but with no satisfactory success, so far as has been demonstrated. Perhaps the earliest attempt, at any rate, one of the earliest attempts artificially to raise a land-locked variety of the sea-salmon was that made in Lier, in the south of Norway. A quantity of salmon fry were in the year 1857 put in a small fresh

water pond. Their growth was found to be slow, for after a period of five years, they had only attained a weight of $1\frac{3}{4}$ lbs : less than one tenth the weight normally reached by the migratory salmon. In the same year 2,000 salmon and sea-trout fry were placed in two lakes in Luardal, Lower 'Thelemarken, and the experiment proved somewhat more satisfactory than the initial attempt at Lier. In 1862 some of the salmon were found to weigh $3\frac{1}{2}$ to 5 lbs. each, while the sea-trout averaged half that weight. At a later date an experiment near Thronthjem, and another near Christiania resulted in salmon weighing from $2\frac{1}{2}$ to 8 and 9 lbs. While the experimenters found that growth is more tardy than is the case with those having access to the salt water, yet the maximum growth seems to be largely influenced by the size of the waters. The larger the lake the speedier their growth. In small ponds the experiment proved no very marked success. Even in large inland seas, like Lake Huron, the late Mr. S. Wilmot stated that he found them somewhat stunted. 'I took the eggs of *Salmo salar*, impregnated them, hatched them and took them up into the rivers running into Lake Huron,' said Mr. Wilmot in 1883, and to day some of the true *Salmo salar* are found in Lake Huron, though smaller than those found along the coast.' The Lake Wernern salmon in Norway are said in size and every other feature to equal if not rival the sea-salmon (see Day, *British Salmonidae*, p. 104.) Sir James Maitland in Mar., 1881, hatched fry from the eggs of sea-salmon, and kept some of the brood until 1884 when he took eggs and milt from them and in Mar., 1885, produced young salmon from small parent fish (smolts) which had never been to the sea. In 1886 some of these young fish were $5\frac{1}{2}$ in. long as Dr. Day has recorded.

Apart from the influence of the water, its salinity and chemical character, there are other conditions which must also be taken into account. The area, depth and geological character, and above all the fauna have a potent influence. The last is but another name for the food-supply, and of the influence of that, Mr. J. Harvie-Brown of Dunipace (Scotland), has given to the scientific world a remarkable instance. Mr. Brown says :—

"I put a $\frac{1}{4}$ lb trout, along with others, into a previously barren loch, in two years some of these trout attained to $4\frac{1}{4}$ lb. weight, developed huge fins and square or rounded tails, lost all spots, took on a coat of dark slime, grew huge teeth, and became *feroces* in that short time. The common burn trout, taken from a very high rocky burn up in the hills, in two years became indistinguishable from *Salmo ferox*. The first year they grew to about 1 lb. or $1\frac{1}{4}$ lb., took on a bright silvery sheen of scales, were deep and high shouldered, lusty and powerful, more resembling Lochleven trout than any others. This was when their feeding and condition were at their best ; but as food decreased, and they rapidly increased in number, spawning in innumerable quantities, and with no enemies, the larger fish began to prey on the smaller, grew big teeth, swam deep and lost colour, grew large fins and a big head, and became *Salmo ferox* so-called. In two years more the food supply became exhausted, and now the chain of lochs holds nothing but huge, lanky, kelty-looking fish and swarms of diminutive 'black nebs,' neither of the sorts de-erving of the angler's notice. The first year they were splendid fish—rich and fat. Now they are dry and tasteless."

Dr. Barfurth ascertained that when migratory fish ascend into fresh water and find no suitable spawning ground they refuse to shed their ova, and an anatomical examination showed that ovarian disease had resulted, and the eggs had degenerated. Certain marine fish, for example, flounders, have been noticed in an egg-bound condition, due to some physiological cause, and the specimens were found to grow sick and ultimately they died. Dr. Barfurth reported that in the case of trout, which were prevented from spawning, the ovaries not only became diseased, but the eggs and brood of the same fish in the following season were very inferior, and had been affected detrimentally. It was this consideration which compelled me to withhold approval of the plan, inaugurated in Canada by the late Mr. S. Wilmot, of retaining parent salmon in sea-water ponds long after they should naturally have reached the upper waters, where the spawning beds are located. In most cases the land-locked salmon, those that is to say which became land-locked naturally, can descend to the sea. There is no insuperable obstacle in the way of their descent to the ocean. The ouananiche of Lake St. John, in the province of Quebec, are occasionally found in the Saguenay river, far below the Grande Décharge,

SESSIONAL PAPER No. 22

and the variety of salmon, evidently a land-locked variety, similar to the ouananiche, and found in Grand Lake, Lake Onawa, and the head waters generally of the St. Croix river, on the borderland of New Brunswick and the state of Maine, can also readily descend to the sea, if they desire to do so. The famous fish-culturist, Mr. Charles G. Atkins, once said of the land-locked salmon in Maine, U.S.A., 'it is likely that it has sometimes occurred to stray individuals to descend the St. Croix river, or the Presumpscot to the sea.' The catadromous habit, however, seems to have been lost, largely, no doubt, owing to the abundance of food, especially the dainty land-locked smelt, which is plentiful in most lakes inhabited by non-migratory salmon. Specimens which do descend such a river as the Saguenay cannot readily return, but this difficulty of return does not apply to land-locked salmon waters generally. It is possible, as already indicated, that the non-seagoing habit was assumed when the physiographic conditions were different. A slight geological elevation or subsidence in the St. Croix river basin would very much alter the means of access to the sea from inland lakes, and some such changes may have been effected, while we know that the basin of the Saguenay is geologically a most remarkable one. The late Mr. Wilmot spoke on this matter in London, in 1883, and remarked:—It might be said, how could the salmon in Lake Ontario be said to be land-locked when the St. Lawrence emptied that lake into the sea? Salmon were feeders in the sea and breeders in fresh-water; they migrated annually to the rivers to reproduce. When they were abundant in the waters of the gulf, they passed up the St. Lawrence, entering every stream on either side up into Lake Ontario; and were it not for the great barrier of Niagara Falls the salmon would be found in the upper springs of Lake Superior. It was their instinct to go onward and onward until they found a suitable spot for spawning, and they would have passed into Lake Erie and Lake Superior, the same as Lake Ontario, were it not for the falls; the consequence was they entered into the smaller streams which fed the lake and went back into Lake Ontario instead of into the sea, where they had remained up to the present time, as the true sea-salmon only acclimatized to fresh-water.

It appears to be wholly different with the large Pacific salmon, known as the spring salmon or quinnat (*Oncorhynchus quinnat*). The California State Fisheries Commissioners, in their report 1876-77, quoted in the report of the U.S. Commissioner of Fisheries, 1878 (Washington, 1880), state of this fish that it readily adapts itself to a life in fresh water, and reproduces its kind where it has no opportunity to go to the ocean. When the dams were constructed on the small streams that go to make the reservoirs of San Andreas and Pillarcitos—which supply the city of San Francisco with water—as also when the dam was constructed on the San Leandro, to supply the city of Oakland, the young of the salmon that had spawned the year previous to the erection of these dams remained in the reservoirs and grew to weigh, frequently, as much as ten pounds; these reproduced until the reservoirs have been stocked. As the supply of fish increased the quantities of food lessened, so that the salmon have gradually decreased in weight until now, after nine years, they do not average more than two pounds. From the fact that, when food was in abundance, they grew to weigh from eight to twelve pounds, and that, as they increased in numbers, they averaged less in size, but still continued to spawn and produce young fish, it would seem that the Sacramento salmon may be successfully introduced into large lakes in the interior of the continent, where, in consequence of dams or other obstructions, they would be prevented from reaching the ocean. The history of this fish in these small reservoirs shows that all that is requisite for their successful increase is the abundant supply of food, to be found in large bodies of fresh water. Salmon, fully mature, weighing two pounds, and filled with ripe eggs, were taken, in September, 1877, in the waters of San Leandro reservoir. These fish were hatched in the stream which supplies the reservoir, and by no possibility have ever been to the ocean. The San Leandro is a coast stream, not exceeding fifteen miles in length, and empties into the Bay of San Francisco. It contains water in the winter and spring, at which time, before the reservoir was constructed, the salmon sought its sources for the purpose of spawning. There was never sufficient water in the months of August or September to permit the fish to reach their spawning grounds. After the construction of the reservoir, large numbers of the salmon that came in from the ocean in January and February were caught at the foot of the dam and transported

alive and placed in the reservoir above. The descendents of these fish thus detained in fresh water and not permitted to go to the ocean, have so far modified the habits of their ancestors that they now spawn in September, instead of in January and February. Inasmuch as these fish spawn in the McCloud, in the headwaters of the Sacramento, and at the sources of the San Joaquin, in the Sierra Nevada, in September, and in short coast range rivers in January and February, and as, when changed to other waters, their eggs ripen at a time when the conditions of their new homes are most favourable for reproduction, they show a plastic adaptability, looking to their future distribution, of much practical, as well as scientific, importance.

This large Pacific salmon, unlike the true or Atlantic salmon, can endure a very high temperature—indeed it is stated to ascend rivers in California, the water in which is no less than 70° F. The colder waters of the eastern sea-board would indeed appear to be less favourable, as there is no clear evidence that any adequate results, indeed any results at all have followed the planting of quinnat salmon in the waters of Ontario and the maritime provinces. The retention of young salmon in restricted waters such as Parker's Lake near Campbellton, N.B., in the Restigouche basin, and at the pond close by the salmon hatchery at Tadoussac, P.Q., has not had satisfactory results. The fish seem dwarfed and never reach more than a third of their usual growth, while there is no evidence that they breed at all. The species of Clupeoid found in Lake Ontario and erroneously called shad, though it is really not distinguishable except in size from the Gaspereau or Alewife, which migrates up rivers from the sea in the maritime provinces, is supposed not to be native to the interior waters. If artificially introduced it is now thoroughly established and has become extremely abundant. It is said to spawn in spring in inshore shallows, and vast schools of them die and are stranded on the lake shore, causing great annoyance to the residents. They accumulate in some seasons in decaying masses, fouling the water and polluting the air. It has been argued that this extraordinary mortality is due to the difficulty of readily descending to the sea, which the Gaspereau along the sea-coasts can easily accomplish. Probably that is not the explanation of the fatal epidemic which occurs every summer. Of a great variety of fishes it cannot be said that change of habitat from salt to fresh water, or vice-versa, has had any such serious effects as that just detailed. Many species voluntarily appear to make the change and suffer no apparent inconvenience, others have found themselves involuntarily in their new environment, and become thoroughly acclimatised, while others have been transferred artificially by man, and have flourished under the change.

There is no well established case of a marine species of shark or dogfish taking permanently to fresh-water, except one instance recorded in the *American Angler*, March, 1897, (Vol. xxvii, p. 87.) Among the strange things told us (says the narrator) was his (Mr. Broder's) chance meeting with a live salt-water dogfish, about fifteen hundred miles from its natural habitat—the ocean and its estuaries—and the writer quotes Mr. Broder as saying: I saw and handled this dogfish in 1881, near the headwaters of the Bruno river, in Elko county, Nevada, about twelve miles from Mountain City, a mining camp. I was accompanied at the time by ten vaqueros (cowboys) and a Mexican named Via. These men were working for Mr. Dan Murphy, who at that time was rated as the largest land owner in the world, as he owned about two million acres in Mexico and a like amount west of the Rocky Mountains. One of the vaqueros brought the dogfish to me, it having been nearly killed by one of the train wagons when crossing a small stream. I think the fish was following the salmon from the Pacific Ocean up the Bruno river, a distance of at least 1,500 miles.

Sharks are known to ascend the Amazon and other great rivers to considerable distances, but not beyond the influence of salt water, while there is a saw-fish (*Pristis perottettii*) in the Senegal river, and some South American and Indian species of Electric Rays (*Torpedo*, *Narcine*, &c.), which are purely fresh water in habitat. A shark (*Carcharias gangeticus*) frequents the Ganges and is found nearly 200 miles from the ocean. In this connection it may be mentioned that of the order of whales also three are residents in fresh water, viz.: the small *Platanista gangetica*, which lives in the Ganges, and *Inia* and *Pontoporia*, found in the Amazon and South American rivers, and belonging to the Grampus and Porpoise family. The Beluga, or large white whale,

SESSIONAL PAPER No. 22

ascends the St. Lawrence river in considerable schools for nearly a hundred and fifty miles from the open sea, passing, indeed, up the Saguenay river for some distance.

The small gadoid, *Microgadus tom-cod*, Walbaum, the tom-cod or frost-fish, a valuable little food-fish, which varies from 4 to 12 inches in length, is capable of enduring great changes in regard to the salinity of the water in which it lives. It ranges on the Atlantic coast of this continent from Labrador to Virginia, and is in great request for the table wherever it is found. Though so dwarfed it is a true cod in all the usual external characteristics, and in its excellence for table use. Occurring as it does to so large an extent in brackish water, especially in harbours and about piers and wharfs, it is found to make its way up rivers as far as the limits where the water is essentially fresh. Its artificial retention in fresh water does not appear to have been attempted, nor are there records of such being accomplished, as there are in the case of the smelt, the sea-herring, striped bass, &c. The field open to the fish culturist in regard to the acclimatization of species of fishes, usually regarded as marine, is a wide and promising one. But much information will be necessary before any successful attempts in this direction can be carried on upon an extensive scale. We know how species vary in their powers of endurance, so that it is impossible except by experiment to presage the tenacity of life which a particular species may possess. Thoreau has said of the catfish or common bullhead, *Ameiurus nebulosus*, that specimens are only killed with extreme difficulty, for they have been observed opening and shutting their mouths for half an hour after their heads have been cut off.

Professor Jordan's studies of the fishes in the waters of Yellowstone Park, state of Wyoming, have yielded some quite unexpected results. The alkaline character of the waters, the calcareous and siliceous matters which so strongly impregnate the ponds, geyser basins and outlets, and the streams and lakes in that remarkable region of hot springs does not seem to be fatal to fish life, nor is the high temperature seriously detrimental in a great many cases. In Yellowstone Lake, trout are especially abundant. Dr. Jordan reports about the hot overflow from Lake Geyser Basin. The hot water flows for a time on the surface, and trout may be taken immediately under these currents. Trout have been known to rise through a scalding hot surface current. They also linger in the neighbourhood of hot springs in the bottom of the lake, and the fact is evident that geyser water does not kill trout. In Heart Lake, trout are most plentiful about the mouth of the Warm Witch Creek. Suckers and chubs (*Leuciscus atrarius*) ascend this creek for some distance, although half its water comes from geysers and hot springs. The chubs are found in water in which the temperature is about 85° F. Dr. Jordan has published many interesting details, and I quote the following:—The Hot River, which drains the Mammoth Hot Springs, flows into Gardiner River. Trout abound about the mouth of this stream, and here, as in numerous other places in the Park, the conventional trick of catching a trout in cold, and scalding it in hot water, is possible. Below the mouth of this Hot River young suckers (*Catostomus griseus*) were found in a temperature of about 88°, and young trout in a temperature of about 75°. The small Miller's Thumbs abound in the Gibbon River about the hot springs. Three were found boiled in the edge of the river below Elk Park, at the mouth of a hot tributary. The volume of hot water poured into any river is greatest in the Firehole, below the upper Geyser Basin. The stream, however, is hardly warm, and the water has little mineral taste, though the abundant vegetation gives it something of the flavour of stewed plants. Even this stream, it would seem, is probably not so hot nor so heavily charged with mineral substance as to be unfit for trout. Its waters constitute a very dilute alkaline siliceous solution. * * * * There are, however, numerous springs in the Park which discharge sulphurous liquids (some of them the black ammoniac sulphide, being very offensive in odour and doubtless fatal to fishes.) Most of these springs have but a very slight discharge, and so exert no appreciable influence on the streams. The upper part of Obsidian Creek between Twin Lakes and Beaver Lake is the only running stream noticed as likely to prove uninhabitable by fishes.

Professor Jordan found the red horse sucker (*Catostomus ardens*) abundant in the warm waters of Witch Creek, while the diminutive *Agosia nubila* was found in the same heated location. The Utah chub (*Leuciscus atrarius*) ascends the same creek in great numbers, going up further than any other fishes and being found in water no

less than 88° F. Thus cyprinoids and trout (the red-throat or Rocky Mountain trout) endure conditions of temperature and chemical impurity of water under which it would at first sight be regarded as improbable not to say impossible, for them to survive. We know that the fresh water species of trout can all at will take to a seawater habitat and, as in New Zealand, become so vastly changed that a specialist would hardly recognize the transformed fish as belonging to familiar species, yet the young salmon and the young trout cannot for more than a few seconds endure salt water. Indeed in the young larval stages they die very soon after transference to salt water—the physical nature of the yolk sack becomes so seriously altered. The whole subject is not only one of great biological and physiological interest, it is also of immense practical importance. If the cyprinoids, the salmonoids, and the gadoids, can furnish examples of this transformation of habitat—the exchange of a fresh water life for life in salt water, there is every reason to think that a much larger range of genera will be found to possess powers of endurance no less remarkable.

The Bras d'Or Lakes in Cape Breton as is well known are peculiar inclosed lakes of sea water, or rather of water whose salinity is markedly less than that of the sea outside. Lobsters, cod, and other valuable marine creatures, are found in these waters, but not in any great abundance. The lobsters are said to be of large dimensions, but by no means so numerous as along the shores washed by the ocean. Cod of very large size too are captured, some 56 and 58 lbs. weight having been taken in Little Bras d'Or Lake; but it has been remarked that the head in these specimens is disproportionately large, as though they were not so well fed as their congeners in the open sea. Cod indeed occur in all parts of the extensive Bras d'Or waters, numbers being taken with hook and line through the ice at Whycocomagh which is at least 50 miles from the sea coast (to the north-east), and 25 miles from the coast (on the south-east) of Cape Breton Island, and the water in some places is almost fresh.

Only one or two members of the cod family (Gadidæ) are, however, known to be truly fresh water species. All the rest are marine. The fresh water codfish known as the cusk, burbot, ling and eel-pout, and by many other names, is a typical Gadoid somewhat resembling the sea-ling *Molva molva*, and ranges from 2½ lbs. to 10 lbs. or 12 lbs. though in extreme north western lakes it is recorded at 50 lbs. or 60 lbs. weight. An allied form belonging to the hake family (*Merlucciidae*) has been found to forsake the salt water, and in winter at any rate resort in considerable numbers to freshwater. An instance of this is afforded by Darling's Lake, near Rothesay, New Brunswick. In this lake, which communicates with the Kennebecasis River, a considerable branch of the River St. John, large numbers of silver hake (*Merluccius bilinearis*, *Mitchill*) are caught on hook and line through the ice. This being a salt water fish, its presence in the waters of Darling's Lake is explained by its habit of following the shoals of gaspereaux or alewives when they ascend in spring from the sea. The true cod (*Gadus morhua*) is found in moderate abundance in the Baltic Sea, the waters of which are of low salinity especially in the bays and inlets along the shores. Other members of the family *Gadidae* occur there such as the haddock, the ling, the whiting, the pollock and the green cod; but none are so numerous as the true cod. As might be surmised, the cod does not reach the size which it attains in the open sea, rarely exceeding 12 or 15 pounds, whereas in the salt water outside it reaches a weight of 50 or 60 lbs. * The specimens indeed become more stunted the further one goes up the Baltic, in the Sound and southern part of the Baltic, off Copenhagen, the size ranges from 3 to 6 lbs., whereas 300 miles further up, off Gothland Island, they run from 2 to 3 lbs.: at 150 miles further up near Stockholm, nearly 500 miles from the Sound, the weight is barely 1 or 2 pounds. They differ in colour, being darker, and showing few spots, in contrast to the rich brownish red mottled markings and spots of the cod nearer the sea or out in the open ocean. The Baltic cod spawn in comparatively shallow water somewhat late in the season off Gothland and Stockholm. A similar instance of the sea-cod's change of habit is recorded in Iceland. In Olufs Fjord lake, a sheet of fresh water near the mouth of the romantic Olufs Fjord, and separated by a neck of land from the sea out-

* The well known Scottish authority, Dr Parnell, was certainly wrong when he said 'Cod are never found but in salt water, and remain habitually in the depth of the sea (Fishes of the Firth of Forth, p. 334).

SESSIONAL PAPER No. 22

side, there are found cod, not distinguishable from the marine cod except by their smaller dimensions. This freshwater species, locally called 'Mauronger' is not found elsewhere in Iceland. In a Norse journal it is stated that M. Elisée Réclus specially mentions this fish as a kind of cod acclimatized to fresh water; but an opinion exists that a subterranean passage did or does allow of communication with the sea, and the cod may have found entrance in that way. Herring, it is stated, have found their way into this freshwater lake, and having passed the winter months there have died. In England, small cod 5 to 8 inches long are found considerable distances up rivers. Thus they are common at Goole, a town on the River Ouse, which empties into the estuary of the Humber, in Yorkshire. In Canada at least five species of Clupeoids very closely allied to the true herring migrate up rivers to spawn in fresh water (viz., the gaspereaux or alewives, *Pomolobi*) two species of shad (*Alosa*) have the same habit, one species of *Dorosoma*, the Gizzard shad, which ascends the St. John River in New Brunswick, and one species of *Brevoortia*, viz., the Menhaden or Pogy. Four other species of clupeoids, at least, have become completely acclimatized to a non-marine environment, viz., the goldeye (*Hiodon alosoides*), found in the Red River, Lake Winnipeg, and western waters, the mooneye (*Hiodon tergisus*) of more eastern lakes and rivers, the blue herring (*Pomolobus chrysochloris*) and the alewife (*P. pseudoharengus*) in Lake Ontario and eastern waters. The last-named occur in Lakes Cayuga and Seneca and in western New York State; but as they annually die in enormous numbers, especially in June and July, some unfavourable circumstance exists, and experts are generally agreed that they are not indigenous. They certainly reach barely half the length of the marine forms (i.e. 6 or 7 inches instead of 12 or 13 inches). There are few records of the acclimatization of the true herring but it is interesting to note that a special race of herrings is native to the Baltic Sea called 'strömming.' They are smaller than the herrings found in perfectly salt water, and paler in coloration; but, contrary to the opinion of experienced herring fishermen, who claim that herring-spawn cannot survive the influence of fresh water, the Baltic herring spawn in suitable grounds irrespective of their salinity—indeed authorities have declared that in brackish water, where rivers debouch into the sea, there is more abundance of minute food for the young herring fry to live upon, and such localities are especially favourable for breeding herring. In the Baltic there are local races of herring and, like their congeners in the sea, they spawn at two periods, viz., spring and late summer, indeed in the Southern Baltic the spawning takes place as late as October. Nowhere indeed has such conclusive evidence been furnished of the very limited and local range of the schools of herring as in the Baltic Sea. Overfishing and unfavourable circumstances have resulted even in that comparatively limited area, (not much more than five times the area of Lake Superior) in the entire destruction of certain local herring fisheries, the schools frequenting other bays and coastal areas not moving in to fill the vacant places of the exterminated fish. Loffoden herring are caught in Borgefjord and in Lake Pollen, the latter almost fresh water but both connected with the Polar Sea by a narrow sound and the catch per annum amounts from 30 to 50 tons. They live and propagate away from pure sea water. Sea herring, and a smaller species closely allied, the sprat, are mentioned as successfully confined in fresh water or rather brackish water by Mr. Arnold, of Guernsey, in his experiments already mentioned, but they did not breed or become transformed into a fresh water form, as is certainly the case with the Baltic herring, specimens of which, some years ago, were kept for a long period in a freshwater tank at the St. Andrew's Laboratory, Scotland, under the superintendence of the eminent zoologist, Professor McIntosh.

Many instances are known of the smelt (*Osmerus mordax*) taking to a life in freshwater, though really a marine species, frequenting brackish water and migrating into freshwater mainly in the fall and in spring. It spawns in brackish water in spring. Colonel Meynell, of Yarm, in north Yorkshire, England, nearly seventy years ago, acclimatized smelts and successfully bred them. It is recorded that they lived 'for four years in a fresh-water pond, having no communication with the sea, and continued to thrive, and propagate abundantly. They were not affected by freezing, as the whole pond, which covered about three acres, was so frozen over as to admit of skating. When the pond was drawn, the fishermen of the Tees considered that they had never seen a

finer set of smelts. There was no loss of flavour nor of quality'. The late Sir James Gibson Maitland successfully tried the same experiment and said 'either the fresh water smelt of America or our own *Osmerus eperlanus*, which I have successfully hatched, and am now rearing in fresh water, if introduced into a Highland loch, for instance, Loch Tay, would enable it to carry a very heavy crop of some of the inland species, for instance land-locked salmon, &c.' (Culture of Salmonidæ, Lond. Int. Fish Exhibit. 1883.)

In New Brunswick, Dr. Philip Cox has described a land-locked smelt—indeed they abound in Loch Lomond, near St. John, N.B., and in the Chamcook waters in the same province. These land locked varieties, Dr. Jordan, the eminent ichthyologist, regards as forming at least two species, or rather subspecies, distinguishable from the sea-running smelt. One form, the Wilton smelt (*Osmerus mordax spectrum*) is land locked in Wilton Pond in Maine, and the other form, the Cobessicontic smelt (*Osmerus mordax abbotti*) is found in the neighbouring waters of Cobessicontic Lake, in Maine. In some instances there are narrow outlets to the sea. But the smelt having acquired the habit of remaining permanently in fresh water, shows no tendency to migrate to salt water. The land locked smelt in Lake Onawa, Maine, cannot descend to the sea and they abound in the lake.* The true smelt belongs to the family salmonidæ and is therefore allied to the trout, salmon and whitefish: but the so-called sand smelt, often termed the Atherine (*Atherina*), of which six species occur in more southerly waters on the Atlantic shores of this continent, is more nearly related to the mullets (*Mugilidæ*) and the sand-rollers (*Percopsidæ*). The atherine to the untrained eye might be readily regarded as a smelt, and like the smelt it has been acclimatized to fresh water, indeed the Guernsey experiment demonstrated this, as the atherine in Mr. Arnold's pond were amongst the most successful species. The mullets are essentially sea fish, yet instances are numerous of the retention of these fish in fresh water inclosures. In the Guernsey pond the mullet survived, but did not breed or become properly acclimatized, but in a fresh water pond in Tampa Bay, Florida, mullet are found in great numbers along with sheepshead (*Sparus* or *Archosargus*), red fish (*Pagrus*), &c. A correspondent in the *American Angler*, April, 1898, describes this lake, which is named 'Salt Lake,' as $1\frac{1}{4}$ miles long by $1\frac{1}{2}$ miles broad, having two small fresh water streams pouring into it, and one small outlet through low marshy woodland, connecting it with Tampa Bay at high water. Twenty five years ago this arm of the bay was salt, and peopled by salt water fish, but during a violent storm a bank was heaped up cutting off the lake, and inclosing some schools of marine fish. Some sharks and sting rays were imprisoned, but seemed unable to survive the winter (1885). The water became a little brackish: but, says the writer referred to, 'it is now perfectly sweet and fresh, and has a slight current towards the small outlet where the water drains off'. Red fish are caught in the lake weighing 38 lbs. and of much richer red colour, and of finer and more delicate flavour than those taken in the sea outside. This last remark applies to mullets and many sea fish when acclimatized in fresh water. Thus Dr. J. C. Mitchell, an authority on the fishes of Egypt, tells us that three species of mullet frequent brackish water there, and when retained in fresh water ponds attain a greater size and a more excellent flavour. He describes Lake Menzaleh, which communicates with the sea by an ancient mouth of the Nile. It is brackish, but varies in salinity at different seasons. Near the fresh water inlets it is comparatively fresh, but near the sea entrance it is more salt, and while there is a preponderance of marine species in the salter portions, the influx of flood water from the Nile affects the salinity of the whole lake, and many species, wanderers from the sea, succumb to the changed conditions. Dr. Mitchell states that all the mullets spawn in the sea and they as a family are essentially shore fishes; but they have a preference for the mouths of rivers, and cut-off lakes where the water is brackish, while not unfrequently they are found to enter rivers,' indeed *Mugil cephalus* and *Mugil capito* have been caught more than 600 miles up the Nile, as far south that is to say as Assouan. 'When kept in fresh water

*Land locked salmon frequently occur in lakes inhabited by land locked smelt, and the latter may account for the loss of the migratory instinct in the former as the salmon are found to mainly feed upon the smelt.

SESSIONAL PAPER No. 22

ponds' adds Dr. Mitchell, 'mullet are found to improve rapidly in weight and condition,' and he suggested to the Egyptian government the experiment of stocking fresh water ponds with mullet fry, which in midsummer abound in the inshore shallows of Lake Menzaleh.

The flat-fishes are without exception marine, yet certain species of flounder are found to wander up rivers long distances from salt water. The common flounder *Pleuronectes flesus* as Frank Buckland stated 'inhabits every part of the British coast, and often ascend to rivers beyond the reach of the tide, thriving alike in salt, brackish or in fresh water. Now that the Thames is getting purer, the flounders are returning to the river above London Bridge.' Many years ago I caught specimens of the flounder at Riccal, near York, on the Ouse, in the north of England, fully fifty-five miles from the sea, and they are recorded on tributaries of the Ouse (viz., the Nidd and Ribble), over eighty miles from the mouth of the Humber. As the species of flounder mentioned and most of the flat-fish, indeed, possess floating eggs not at all favourable for deposition in rivers and running water, it is probable that they do not successfully breed away from the sea, as their eggs would appear to have little chance of survival. Dr. Parnell makes the claim, which has already been mentioned in connection with other species of fish, that flounders found in fresh water are more highly esteemed for the table than those taken in salt water. He also makes the questionable assertion that they spawn in brackish water in March and April, but they certainly make their way into fresh water in many cases at a very early stage. Thus, Professor McIntosh describes them as occurring numerously in May at the outlet of a mill stream, which pours fresh water into St. Andrew's Harbour, Scotland, and their length at that time was barely half an inch. Young flounders very little older, Dr. McIntosh adds, can be captured considerable distances up the fresh water stream. Other species of flat-fishes appear less hardy and venturesome. The plaice (*Pleuronectes platessa*) has, however, been successfully retained and fattened in fresh-water ponds, as Dr. Parnell states, and the highly esteemed sole (*Solea vulgaris*) and the turbot (*Rhombus maximus*) were thoroughly acclimatized by Mr. Arnold, in Guernsey. There is only one record of the occurrence of the sole under natural conditions in practically fresh water limits, viz., near the mouth of the Yorkshire Ouse, in the estuary of the Humber. Such fishes as the striped bass, which, like the smelt, regularly ascends for some distance fresh-water streams, might be expected to survive retention, and this has been proved to be the case. In some of the larger Canadian rivers, the St. John River and the Miramichi River for example, striped bass (*Roccus lineatus*) migrate for distances of from thirty to forty miles above the limits of sea water, and congregate in large schools in deep holes in the bed of the river. There they remain in a dormant condition, resting on the muddy bottom, and are captured in great numbers by a kind of scoop net. Dr. Perley in his 'Sea and River Fisheries of New Brunswick' (1852) says 'the places which they frequent are easily discovered, the fish being seen through the clear ice when it first makes; large holes are cut in the ice, and the fish are lifted out with a circular net on a strong wooden bow, called a dip-net. All the fish in each locality, of whatever size are thus taken; and in many of the northern rivers, especially the Richibucto, and North-west Miramichi, where they were formerly very abundant, they are now quite scarce and only found of small size.' There is record of a striped bass confined in a fresh water pond which grew to a weight of 20 pounds—a considerable weight for a fish retained for some years in abnormal surroundings. The flavour too of the impounded striped bass is stated to improve, for Dr. MacCulloch personally vouched for the superiority of the flavour of the specimens confined in Mr. Arnold's fresh-water lake in Guernsey.

Fish vary so greatly in their tenacity of life, that until experiments have shown what any particular species can endure without permanent injury, it is not possible to foretell its capabilities. The German carp, for example has peculiar tenacity and endurance. A member of Parliament informed me, a year or two ago, of a fine specimen of carp that was found several miles from Lake Erie where they were planted and now abound. This carp was a very large specimen and was wriggling along a plough-furrow in which there was little or no water, evidently kept moist and alive by the thick damp herbage, just as they may be kept alive in damp moss. The accomplished angling authority of New York, Mr. Wm. C. Harris, records a hardly less extraordinary

case of the tenacity of the German carp: 'Many clubs are draining their ponds in the hope to eradicate this fish; but it will be well to do the work thoroughly, for Mr. Louis Papineau, of Montebello, Canada, tells us of a carp pond being drained, cleaned and exposed for some days until it was thoroughly dry. On the sixth day water was introduced, and some hours after several large carp were seen swimming near the surface. This is another striking instance of the vitality of this fish, which evidently burrowed into the mud as the pond was drained.* Many fishes are able to survive dry seasons by immersing themselves in mud; but they are specially organized for that peculiar habit. The bull-head tribe, (*Siluridae*), are hardy and tenacious and being exceptionally good table fish afford a fine field for experiment in acclimatization.

The Catfish family, including so many forms notoriously hardy and tenacious of life might be supposed to present numerous examples of acclimatization by transference from fresh water to salt water. Yet the records of successful transplanting are few. There are thirty or forty species which are strictly marine; but certain of the fresh water species have been found to be capable of enduring life in salt water. Thus the *Fishing Gazette* (of New York) announced in April, 1896, the capture of a freshwater catfish in the sea at Gravesend Bay, Long Island. A few days later, six 'squaretailed bullheads', of the same kind as the foregoing, were taken in a hoop- or fyke-net, and they were kept alive for some days by alternately supplying fresh and salt water in imitation of the tidal inflow and outflow, but the fish could not be kept in captivity very long. No doubt by a gradual process of change the common catfishes of our lakes and rivers could be acclimatized, and their increasing market importance would give great value to the experiment. If the fresh water species could be so acclimatized as to endure or rather live in health in water strongly impregnated with saline and alkaline matters, their suitability for introduction into certain barren waters in the north-west of the Dominion would be demonstrated. But while numerous instances are to hand of salt water fishes becoming completely reconciled to a fresh water environment, the cases seem to be far rarer of fishes, native to fresh water, assuming a salt water existence. Yet Bloch somewhere states that the grayling, one of the most delicate and fastidious of the salmonoids, frequents the Baltic and the Caspian Sea. Sir Humphrey Davy, curiously enough, laid special stress upon this very point, that while salmon and trout readily endure such changes of conditions, the grayling (*Thymallus*) will not bear even brackish water without dying. Grayling and perch undoubtedly live in certain parts of the Baltic which Linnaeus stated, after drinking some of the water, is very slightly brackish, even a mile from the shore in the upper portion. The perch (*Perca flavescens*) is found very abundantly at the mouth of the Miramichi and other Canadian rivers, where the water is quite saline, indeed where the estuary is practically part of the sea.

There are numerous species of very small fish, of no importance from an economic point of view, which frequent indifferently sea water and fresh-water. Thus the *Gastrosteidae* or stickle-backs are found in astonishing abundance in shallow estuaries, and the three spined species nests, breeds and passes its whole life frequently in small pools just above high-water mark, where high tides thoroughly impregnate the water with saline matters; but which during most of the year are kept slightly brackish by trickling streams of fresh water from the adjacent land. There are of course genuine marine species in the family, one (*Gastrosteus spinachia*), the fifteen spined species, builds a large nest of *Fucus* or other marine plants attached to rocks between tide-marks, another *G. gladiunculus* is found in the east Atlantic coast amid floating sea weeds. *Gastrosteus pungitius*, the ten spined species, is recorded from brackish and salt water, but its relatives, especially *Gastrosteus aculeatus*, are found distributed, from lakes and streams far inland and up the highest mountains to low lying marine swamps and estuaries. Indeed the species named often abounds in pools just about high-water mark making its small mound-like nest and rearing its numerous families regardless of the variety of conditions obtaining in these various situations. There is no more remarkable feature presented by fishes than this incapability, on the one hand, in some species, of enduring salt water or even brackish water; and on the other hand in other species, the capability

* Recorded instances of carp flourishing in hot and in alkaline waters are questionable (See Bulletin U.S. Fish Commis. Vol. IV., p. 426 and Vol. V., p. 427.)

SESSIONAL PAPER No. 22

of living and flourishing in the midst of a fresh water, brackish or even extreme salt-water environment.

The plasticity of various species in this respect is a matter upon which experiments would be of great value. Changed conditions certainly work the most marvellous results. Probably no more curious example could be instanced than that of a small fish* found in Ceylon and in the Celebes, which has so accustomed itself to living on damp rocks out of water that the late Professor Balfour once declared that from what he saw of its habits he expected that the fish would be inevitably drowned by long immersion in water. 'These fishes,' says Dr. Günther, 'are able to progress out of water, on humid places, and to hunt after their prey, which consists of terrestrial insects, using their muscular fins to spring with, they jump along by a series of leaps, over rocks, seaweed and the surface of the water, and prefer escaping in that way to swimming beneath the surface.' The accomplished Dr. John Davy, brother of Sir Humphrey Davy, carried on some experiments, forty years ago, on the vitality of fishes, and his conclusion may be stated as follows,—that the enduring power of each fish in relation to variation of temperature, &c., differs in degree, the *Salvelini*, to which our native brook trout belongs, being most intolerant, the *Cyprinidæ* least so, though of course there are limits to the endurance and accommodative power of every fish, even the most plastic and hardy.

**Periophthalmus*.

APPENDIX No. I.

EXPENDITURE AND REVENUE.

The total expenditure for all Fisheries services, except Civil Government, for the fiscal year ending June 30, 1900, including Fishing Bounty, amounted to \$411,717.35, being within the appropriation by \$31,110.45.

The total net fisheries revenue, during the same period, from rents, license fees, fines and sales, including the *modus vivendi* licenses to United States vessels, amounted to \$88,406.59.

Service.	Expenditure	Vote.
	\$ cts.	\$ cts.
Fisheries.....	85,151 45	85,600 00
Fish-breeding	38,070 12	48,450 00
Fisheries protection service.....	97,370 11	100,000 00
Fishing bounty.....	160,000 00	160,000 00
Miscellaneous expenditure	31,125 67	48,777 80
Total	411,717 35	442,827 80

The details of the above will be found in the Auditor General's report under the proper headings.

In addition to the above, the following summary shows the salaries and disbursements of fishery officers in the several provinces, together with the expenses for maintenance of the different fish-breeding establishments throughout the Dominion.

Service.	Expenditure	Vote.
	\$ cts.	\$ cts,
Fisheries, Ontario.....	3,604 94	
“ Quebec.....	5,452 41	
“ New Brunswick	21,459 94	
“ Nova Scotia.....	27,461 91	
“ Prince Edward Island	7,364 20	
“ Manitoba	1,723 59	
“ North-west Territories.....	3,763 23	
“ British Columbia.....	13,662 17	
General account.....	652 41	
Total.....	85,151 45	85,600 00

SALARIES and Disbursements of Fishery Officers.

Service.	Expenditure	Amount.
	\$ cts.	\$ cts.
Fish-breeding, Ottawa hatchery	1,717 11	
" Newcastle "	3,646 32	
" Sandwich "	5,217 79	
" Tadoussac "	3,872 52	
" Gaspé "	1 76	
" Magog "	400 00	
" Restigouche "	8,426 76	
" Bedford "	1,474 13	
" Bay View "	1,936 71	
" Quinté Bass Pond hatchery	94 50	
" Miramichi hatchery	1,795 94	
" St. John Riv. "	2,155 64	
" Fraser Riv. "	2,741 88	
" Selkirk "	2,791 71	
General account	1,797 35	
Total		38,070 12

This expenditure by provinces is subdivided as follows :--

EXPENDITURE.

	\$ cts.	
<i>Ontario.</i>		
Salaries of officers	2,600 00	
Disbursements of officers	778 02	
Miscellaneous	226 92	
Total		3,604 94
<i>Quebec.</i>		
Salaries of officers	2,155 78	
Disbursements of officers	3,325 01	
Miscellaneous	68 25	
Total		5,548 94
<i>New Brunswick.</i>		
Salaries of officers	14,331 83	
Disbursements of officers	6,388 80	
Miscellaneous	739 31	
Total		21,459 94
<i>Nova Scotia.</i>		
Salaries of officers	15,225 38	
Disbursements of officers	12,154 52	
Miscellaneous	82 01	
Total		27,461 91
<i>Prince Edward Island.</i>		
Salaries of officers	4,958 02	
Disbursements of officers	1,732 21	
Miscellaneous	673 97	
Total		7,364 20

SESSIONAL PAPER No. 22

EXPENDITURE—*Concluded.*

<i>Manitoba.</i>	\$ cts.	\$ cts.
Salaries of officers.....	1,716 16	
Miscellaneous.....	7 43	
Total		1,723 59
<i>North-west Territories.</i>		
Salaries of officers.....	2,731 13	
Disbursements of officers.....	1,016 18	
Miscellaneous.....	15 92	
Total.....		3,763 23
<i>British Columbia.</i>		
Salaries of officers.....	7,296 41	
Disbursements of officers ..	386 40	
Miscellaneous... ..	5,979 36	
Total		13,662 17
General account.		652 41
Grand total		85,151 45

FISH-BREEDING.

<i>Newcastle Hatchery.</i>		
Salaries.....	634 68	
Miscellaneous expenditure.....	3,011 64	
Total.....		3,646 32
<i>Sandwich Hatchery.</i>		
Salaries.....	900 00	
Miscellaneous expenditure.....	4,317 79	
Total		5,217 79
<i>Ottawa Hatchery.</i>		
Salaries.....	800 00	
Miscellaneous expenditure.....	917 11	
Total		1,717 11
<i>Tadoussac Hatchery.</i>		
Salaries.....	650 00	
Miscellaneous expenditure.....	3,222 52	
Total.....		3,872 52
<i>Gaspé Hatchery.</i>		
Miscellaneous expenditure.....		1 76

FISH-BREEDING—Continued

	\$ cts.	\$ cts.
<i>Magog Hatchery.</i>		
Salaries	180 00	
Miscellaneous expenditure	220 00	
Total		400 00
<i>Restigouche Hatchery.</i>		
Salaries	800 00	
Miscellaneous expenditure	7,626 76	
Total		8,426 76
<i>Bedford Hatchery.</i>		
Salaries	450 00	
Miscellaneous expenditure	1,024 13	
Total		1,474 13
<i>Bay View Hatchery.</i>		
Salaries	450 00	
Miscellaneous expenditure	1,486 71	
Total		1,936 71
<i>Miramichi Hatchery.</i>		
Salaries	1,000 00	
Miscellaneous expenditure	795 94	
Total		1,795 94
<i>St. John River Hatchery.</i>		
Salaries	600 00	
Miscellaneous expenditure	1,555 64	
Total		2,155 64
<i>Selkirk Hatchery.</i>		
Miscellaneous expenditure	2,791 71	
Total		2,791 71
<i>Fraser River Hatchery.</i>		
Salaries	458 34	
Miscellaneous expenditure	2,283 54	
Total		2,741 88
<i>Quinte Bass Pond.</i>		
Miscellaneous expenditure	94 50	
Total		94 50
<i>General Account.</i>		
Miscellaneous expenditure	1,797 35	
Total		1,797 35
Total, Fish-breeding		38,070 12

SESSIONAL PAPER No. 22

MISCELLANEOUS.

MISCELLANEOUS.	\$	cts.
Building fishways.....	911	06
Legal and incidental expenses.....	747	24
Canadian fisheries exhibit.....	1,046	17
Expenditure in connection with the distribution of fishing bounties.....	4,831	20
Surveys of oyster beds.....	4,105	08
Issuing licenses to United States fishing vessels.....	413	31
Fisheries revenue (refunds.).....	10	90
Cold storage.....	10,977	30
Biological Station.....	736	61
A. H. N. Bruce, compensation for loss.....	3,594	00
C. W. Gauthier, for supplying ova several years.....	1,300	00
Russian seizures.....	2,452	80
Total.....	31,125	67

FISHERIES PROTECTION SERVICE—1899-1900.

<i>Steamer 'Acadia.'</i>	\$	cts.	\$	cts.
Wages of officers and men.....	8,423	31		
Provisions.....	3,246	00		
Fuel.....	1,052	45		
Repairs.....	11,245	72		
Miscellaneous.....	5,590	43		
Total.....			29,557	91
<i>Steamer 'La Canadienne.'</i>				
Wages of officers and men.....	7,865	93		
Provisions.....	2,543	39		
Fuel.....	2,646	10		
Repairs.....	2,477	74		
Miscellaneous expenditure.....	3,437	26		
Total.....			18,970	42
<i>Steamer 'Curlew.'</i>				
Wages of officers and men.....	5,263	51		
Provisions.....	1,457	84		
Fuel.....	1,160	33		
Repairs.....	4	40		
Miscellaneous expenditure.....	2,077	22		
Total.....			9,963	30

FISHERIES PROTECTION SERVICE—Continued.

<i>Steamer 'Petrel.'</i>		
Wages of officers and men.....	6,552 11	
Provisions.....	2,071 05	
Fuel.....	1,580 84	
Repairs.....	1,863 74	
Miscellaneous expenditure.....	182 98	
Total.....		12,250 72
<i>Steamer 'Constance.'</i>		
Wages of officers and men.....	6,287 02	
Provisions.....	2,313 44	
Fuel.....	4,225 01	
Repairs.....	2,115 29	
Miscellaneous expenditure.....	1,925 94	
Total.....		16,866 70
<i>Schooner 'Osprey.'</i>		
Wages of officers and men.....	3,918 03	
Provisions.....	1,360 23	
Fuel.....	32 40	
Repairs.....	64 30	
Miscellaneous expenditure.....	2,472 62	
Total.....		7,847 58
<i>Schooner 'Kingfisher.'</i>		
Wages of officers and men.....	3,253 82	
Provisions.....	2,480 30	
Fuel.....	61 41	
Repairs.....	380 00	
Miscellaneous expenditure.....	2,705 78	
Total.....		8,881 31
Fisheries Intelligence Bureau.....		2,286 69
General account.....		7,612 18
Total.....		114,236 81
LESS—Amount paid by Customs Dept. for Str. 'Constance'.....		16,866 70
Net total.....		97,370 11

SESSIONAL PAPER No. 22

STATEMENT of Fisheries Revenue paid to the credit of the Receiver General of Canada,
for the Fiscal Year ended June 30, 1900.

	\$	cts.
Ontario, rents, license fees, fines, &c.....	794	12
Quebec	2,543	04
Nova Scotia	5,494	49
New Brunswick	12,015	27
P. E. Island	2,207	12
Manitoba	2,028	00
N. W. Territories	1,522	50
British Columbia	53,195	35
	79,799	89
LESS—Refunds.....	10	90
	79,788	99
Licenses to U.S. fishing vessels.....	8,617	60
Net Total.....	88,406	59

64 VICTORIA, A. 1901

COMPARATIVE STATEMENT of Expenditure and Revenue of the

Number.		1886-87.		1887-88.		1888-89.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1	Ontario	19,534 01	15,063 57	19,860 52	18,251 25	19,264 98	24,266 06
2	Quebec	14,966 55	3,804 66	13,463 37	5,394 99	12,991 63	3,380 79
3	New Brunswick	16,944 87	4,417 52	20,533 20	7,625 64	20,298 00	8,282 88
4	Nova Scotia	18,092 21	1,585 28	18,308 02	3,905 44	20,201 09	2,744 23
5	Prince Edward Island	4,044 49	128 00	3,402 51	.....	3,746 69	140 00
6	Manitoba & N. W. Territories.	2,468 25	5 00	2,816 64	819 25	2,848 16	848 00
7	British Columbia	5,860 72	943 50	3,661 83	6,934 55	4,333 63	6,416 00
8	Fish-breeding and fishways ...	37,864 22	.....	41,082 04	.....	41,315 12	352 50
9	Fisheries Protection Service..	134,340 12	.....	77,102 98	.....	69,693 82	.....
10	Miscellaneous	11,327 77	.....	13,498 56	.....	10,912 18	.....
	Totals	265,443 21	25,947 53	213,729 67	42,931 12	205,605 30	46,440 46
	Fishing bounties	160,903 59	.....	163,757 92	.....	149,990 63	.....
		1893-94.		1894-95.		1895-96.	
		Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
11	General Account Fisheries ...	.....	.....	.....	.....	.....	.....
12	Ontario	22,634 37	28,632 82	21,938 56	33,211 60	24,917 48	35,681 68
13	Quebec	11,692 82	7,211 82	12,459 34	8,836 18	11,870 43	8,160 98
14	New Brunswick	18,522 94	8,333 24	21,370 94	11,170 36	20,526 56	10,696 88
15	Nova Scotia	20,420 81	5,296 27	23,555 38	7,075 07	23,049 41	6,180 93
16	Prince Edward Island	3,078 55	980 15	3,796 58	3,312 30	3,555 87	2,161 85
17	Manitoba	5,331 29	926 99	6,178 71	2,458 80	6,915 20	2,256 69
18	North-west Territories						
19	British Columbia	5,283 21	25,337 90	6,218 74	23,517 25	6,226 77	26,410 75
20	Fish-breeding	45,024 67	.....	39,730 93	.....	38,050 41	.....
21	Fisheries Protection Service..	115,147 59	.....	100,207 29	.....	102,021 72	.....
22	Miscellaneous	34,892 19	.....	24,619 86	.....	20,203 25	.....
	Totals	282,028 44	76,719 19	260,976 33	89,581 56	257,237 10	91,549 76
	Fishing bounties	158,794 54	.....	160,089 42	.....	163,567 99	.....

SESSIONAL PAPER No. 22

Fisheries Department, from July 1, 1886, to June 30, 1900.

1889-90.		1890-91.		1891-92.		1892-93.		
Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	Expendi- ture.	Revenue.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
14,539 87	23,666 96	15,540 30	26,517 70	15,155 83	25,368 90	20,116 91	30,623 09	1
9,670 94	5,409 81	10,666 98	3,642 14	10,917 36	4,742 76	11,761 34	7,471 70	2
14,914 95	8,834 35	16,082 77	7,193 69	15,707 98	6,334 83	15,721 05	7,831 53	3
17,395 24	5,424 95	17,844 19	5,582 65	18,755 86	3,357 42	19,444 22	6,782 02	4
3,113 21	302 88	3,242 25	667 00	1,835 65	166 00	2,847 60	304 10	5
3,604 70	794 00	3,609 03	1,234 00	3,593 43	1,079 00	3,932 96	1,661 68	6
3,634 41	11,367 50	4,220 53	12,859 02	6,158 17	8,192 48	5,490 60	40,264 00	7
39,126 91	.....	39,496 45	1,286 50	43,957 74	178 00	47,322 49	.....	8
64,434 66	1,176 38	83,050 16	1,934 49	93,397 40	.....	106,805 39	.....	9
9,313 92	.....	13,382 28	.....	17,449 06	.....	100,602 14	.....	10
178,748 81	56,976 83	207,234 94	60,917 19	226,928 48	49,719 39	334,044 70	94,938 12	
149,999 85	.....	165,967 22	.....	156,892 25	.....	159,752 15	.....
1896-97.		1897-98.		1888-99.		1899-00.		
2,198 47	.....	2,389 66	.....	2,632 12	.....	652 41	.....	11
21,592 40	32,814 66	19,239 34	30,574 57	11,784 22	5,830 85	3,804 94	794 12	12
12,910 80	7,876 12	11,140 16	7,571 15	11,350 27	6,287 71	5,452 41	2,543 04	13
21,671 92	10,110 77	17,063 58	5,317 08	22,922 50	10,430 08	21,659 94	12,015 27	14
23,682 33	5,239 55	21,683 91	11,511 85	25,348 11	6,668 22	27,461 91	5,494 49	15
3,744 36	2,032 25	6,775 78	2,707 57	6,832 85	2,242 24	7,364 30	2,207 12	16
1,908 14	1,719 00	1,206 26	1,515 00	1,883 37	1,537 85	1,723 59	2,028 00	17
2,181 58	344 13	2,324 66	393 87	4,065 68	150 50	3,848 25	1,522 50	18
8,841 64	39,888 82	8,508 79	47,864 75	8,459 47	45,801 75	13,662 17	53,195 35	19
27,330 73	.....	28,002 32	.....	34,522 57	.....	38,070 12	.....	20
99,357 01	.....	101,807 96	.....	105,133 27	.....	97,370 11	.....	21
62,777 30	.....	59,919 56	.....	23,207 73	.....	31,125 67	.....	22
289,197 01	100,025 30	280,061 98	107,455 84	427,599 16	76,949 20	411,717 35	79,799 89	
154,389 77	.....	157,504 00	.....	159,459 00	.....	160,000 00	.....

APPENDIX No. 2.

FISHING BOUNTIES.

The payments made for this service are under the authority of Act 54-55 Vic., cap. 42, intituled: 'An Act to encourage the development of the sea fisheries and the building of fishing vessels,' which provides for the payment of the sum of \$160,000 annually, under regulations to be made from time to time by the Governor General in Council.

REGULATIONS.

The regulations governing the payment of fishing bounties are as established by the following Order in Council dated the 10th December, 1897.

Order in Council.

AT THE GOVERNMENT HOUSE AT OTTAWA,
FRIDAY, the 10th day of December, 1897.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

His Excellency, in virtue of the provisions of 'The Bounty Act, 1891,' 54-55 Victoria, chapter 42, and by and with the advice of the Queen's Privy Council for Canada, is pleased to order that the regulations governing the payment of fishing bounties established by order of the Governor in Council dated the 24th August, 1894, shall be and the same are hereby rescinded, and the following regulations substituted therefor:—

1. Resident Canadian fishermen who have been engaged in deep-sea fishing for fish other than shell-fish, salmon and shad, or fish taken in rivers, or mouths of rivers, for at least three months, and have caught not less than 2,500 pounds of sea-fish, shall be entitled to a bounty; provided always, that no bounty shall be paid to men fishing in boats measuring less than 13 feet keel, and not more than 3 men (the owner included) will be allowed as claimants in boats under 20 feet.

2. No bounty shall be paid upon fish caught in trap-nets, pound-nets and weirs, nor upon the fish caught in gill-nets fished by persons who are pursuing other occupations than fishing, and who devote merely an hour or two daily to fishing these nets but are not, as fishermen, steadily engaged in fishing.

3. Only one claim will be allowed in each season, even though the claimant may have fished in two vessels, or in a vessel and a boat, or in two boats.

4. The owners of boats measuring not less than 13 feet keel which have been engaged during a period of not less than three months in deep-sea fishing for fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty on each such boat.

5. Canadian registered vessels, owned and fitted out in Canada, of 10 tons and upwards (up to 80 tons) which have been exclusively engaged during a period of not less than three months in the catch of sea-fish other than shell-fish, salmon or shad, or fish taken in rivers, or mouths of rivers, shall be entitled to a bounty to be calculated on the registered tonnage which shall be paid to the owner or owners.

SESSIONAL PAPER No. 22

6. The three months during which a vessel must have been engaged in fishing, to be entitled to bounty, shall commence on the day the vessel sails from port on her fishing voyage and end the day she returns to port from said voyage.

7. Owners or masters of vessels intending to fish and claim bounty on their vessels must, before proceeding on a fishing voyage, procure a license from the nearest Collector of Customs or Fishery Overseer, said license to be attached to the claim when sent in for payment.

8. Dates and localities of fishing must be stated in the claim, as well as the quantity and kinds of sea-fish caught.

9. Ages of men must be given. Boys under 14 years of age are not eligible as claimants.

10. Claims must be sworn to as true and correct in all their particulars.

11. Claims must be filed on or before the 30th November in each year.

12. Officers authorized to receive claims will supply the requisite blanks free of charge, and after certifying the same will transmit them to the Department of Marine and Fisheries.

13. No claim in which an error has been made by the claimant or claimants shall be amended after it has been signed and sworn to as correct.

14. Any person or persons detected making returns that are false or fraudulent in any particular will be debarred from any further participation in the bounty, and be prosecuted according to the utmost rigour of the law.

15. The amount of the bounty to be paid to fishermen and owners of boats and vessels will be fixed from time to time by the Governor in Council.

16. All vessels fishing under bounty license are required to carry a distinguishing flag, which must be shown at all times during the fishing voyage at the main-topmast head. The flag must be four feet square in equal parts of red and white, joined diagonally from corner to corner. Any case of neglect to carry out this regulation reported to the Department of Marine and Fisheries will entail the loss of the bounty, unless satisfactory reasons are given for its non-compliance.

JOHN J. MCGEE,
Clerk of the Privy Council.

There were received for the year 1899, 13,893 claims, a decrease of 786 compared with the year 1898.

The number of claims paid during the year was 13,628, being a decrease of 873 as compared with the previous year.

There were \$71,079.50 in bounties paid to vessels and their crews, and \$89,920.50 to boats and boat fishermen, making the total bounty paid during the year 1899-1900, \$160,000.

The number of vessels which received bounty during the year was 789, the total tonnage being 26,539 tons, showing an increase of 5 vessels and 1,431 tons, as compared with the previous year.

Bounty was paid on 12,839 boats, and to 21,738 boat fishermen during the year, being a decrease of 908 boats and 1,763 fishermen, as compared with 1898.

64 VICTORIA, A. 1901

GENERAL STATEMENT of Fishing Bounty Claims received and paid for the Year 1899.

Province.	County.	Number of Claims received.	Number of Claims rejected.	Number of Claims held in abeyance.	Number of Claims paid.
Nova Scotia.....	Annapolis.....	135	2		133
	Antigonish.....	128		11	117
	Cape Breton.....	489	6	10	473
	Colchester.....				
	Cumberland.....	7			7
	Digby.....	495	5		490
	Guysborough.....	1,028	7	7	1,014
	Halifax.....	1,467	66		1,401
	Hants.....	1			1
	Inverness.....	546	2	2	542
	King's.....	49	2		47
	Lunenburg.....	965	1		964
	Pictou.....	17		8	9
	Queen's.....	213			213
	Richmond.....	943	4	2	937
	Shelburne.....	729	1	3	725
	Victoria.....	474			474
	Yarmouth.....	208	1		207
	Totals.....	7,894	97	43	7,754
New Brunswick.....	Charlotte.....	384	7	2	375
	Gloucester.....	363	15		348
	Kent.....	50			50
	Northumberland.....	6			6
	Restigouche.....				
	St. John.....	46			46
	Westmorland.....				
Prince Edward Island.....	Totals.....	849	22	2	825
	King's.....	546	1	26	519
	Prince.....	364		42	322
	Queen's.....	106			106
Quebec.....	Totals.....	1,016	1	68	947
	Bonaventure.....	841		12	829
	Gaspé.....	2,458	7	8	2,443
	Rimouski.....	49	1		* 52
	Saguenay.....	786	3	6	* 778
	Totals...	4,134	11	26	4,102
	Grand totals.....	13,893	131	139	13,628

*NOTE.—The number of claims paid includes several applications for previous years, which explains the difference between claims paid and claims received, after deducting those rejected.

SESSIONAL PAPER No. 22

DETAILED STATEMENT of Fishing Bounties paid to Vessels in each County for the Year 1899.

Province.	County.	Number of Vessels.	Tonnage.	Average Tonnage.	Number of Men.	Amount paid.
						\$ cts.
Nova Scotia.....	Annapolis	13	309	23·77	77	848 00
	Antigonish	1	10	10	2	24 00
	Cape Breton.....	15	304	20·26	78	850 00
	Cumberland	1	15	15	3	36 00
	Digby.	54	1,664	30·81	487	5,072 50
	Guysborough.....	26	629	24·19	149	1,672 00
	Halifax.....	61	1,435	23·52	368	4,011 00
	Hants.....	1	17	17	2	31 00
	Inverness.....	25	367	14·68	126	1,249 00
	King's.. . . .	1	14	14	3	35 00
	Lunenburg	166	12,193	73·45	2,598	30,379 00
	Pictou.....					
	Queen's.....	9	257	28·55	63	698 00
	Richmond.....	50	1,530	30·6	357	4,029 00
	Shelburne	49	1,849	37·53	488	5,265 00
	Victoria.....	3	55	18·33	15	160 00
	Yarmouth.....	44	1,890	42·95	507	5,439 00
	Totals.....	519	22,538	43·43	5,323	59,798 50
New Brunswick.....	Charlotte.....	43	773	17·97	166	1,935 00
	Gloucester.....	185	2,210	11·94	683	6,991 00
	Kent					
	Northumberland ...	3	39	13	11	123 00
	Restigouche					
	St. John.....	7	109	15·57	25	284 00
	Totals	238	3,131	13·15	885	9,333 00
Prince Edward Island....	King's.....	8	213	26·62	39	486 00
	Prince.....	6	143	23·83	30	353 00
	Queen's.....	1	17	17	7	66 00
	Totals.....	15	373	24·86	76	905 00
Quebec	Bonaventure	1	21	21	3	42 00
	Gaspé.....	3	83	27·66	16	195 00
	Rimouski.....					
	Saguenay	13	393	30·23	59	806 00
	Totals... ..	17	497	29·23	78	1,043 00
	Grand totals....	789	26,539	33·63	6,362	71,079 50

DETAILED STATEMENT of Fishing Bounties paid to Boats in each County for the Year 1899.

Province.	County.	Number of Boats.	Number of Men.	Amount. paid.	Total Bounty paid to Vessels and Boats in 1899.
				\$ cts.	\$ cts.
Nova Scotia..	Annapolis	120	178	743 00	1,591 00
	Antigonish.	116	170	711 00	735 00
	Cape Breton	458	837	3,387 50	4,237 50
	Cumberland	6	8	34 00	70 00
	Digby	436	782	3,173 00	8,245 50
	Guysborough.	988	1,534	6,357 00	8,029 00
	Halifax	1,340	1,799	7,634 50	11,645 50
	Hants				31 00
	Inverness.	517	1,154	4,555 50	5,804 50
	King's	46	73	301 50	336 50
	Lunenburg.	798	947	4,112 50	34,491 50
	Pictou	9	16	65 00	65 00
	Queen's	204	362	1,471 00	2,169 00
	Richmond	887	1,340	5,577 00	9,606 00
	Shelburne	676	1,108	4,554 00	9,819 00
	Victoria	471	750	3,096 00	3,256 00
	Yarmouth	163	247	1,027 50	6,466 50
	Totals	7,235	11,305	46,800 00	106,598 50
New Brunswick.	Charlotte	332	501	2,085 50	4,020 50
	Gloucester	163	380	1,493 00	8,484 00
	Kent	50	73	305 50	305 50
	Northumberland	3	8	31 00	154 00
	Restigouche				
	St. John.	39	65	266 50	550 50
	Westmorland				
	Totals	587	1,027	4,181 50	13,514 50
Prince Edward Island.	King's	511	755	3,153 50	3,639 50
	Prince	316	715	2,818 50	3,171 50
	Queen's	105	240	945 00	1,011 00
	Totals	932	1,710	6,917 00	7,822 00
Quebec	Bonaventure	828	1,437	5,857 50	5,899 50
	Gaspé	2,440	4,873	19,496 50	19,691 50
	Rimouski	52	79	328 50	328 50
	Saguenay	765	1,307	5,339 50	6,145 50
	Totals	4,085	7,696	31,022 00	32,065 00
	Grand totals	12,839	21,738	88,920 50	160,000 00

GENERAL STATISTICS.

The fishing bounty was first paid in 1882.

The payments were made each year on the following basis :—

1882, vessels \$2 per ton, one half to the owner and the other half to the crew.
Boats at the rate of \$5 per man, one-fifth to the owner and four-fifths to the men.
1883, vessels \$2 per ton, and boats \$2.50 per man, distributed as in 1882.
1884, vessels \$2 per ton, as in 1882 and 1883.

Boats from 14 to 18 feet keel.....	\$1 00
do 18 to 25 do	1 50
do 25 feet keel upwards.....	2 00
And boat fishermen \$3 each.	

1885, 1886 and 1887, vessels \$2 per ton as in previous years. Boats measuring 13 feet keel having been admitted in 1885, the rates were :—Boats from 13 to 18 feet keel, \$1 ; from 18 to 25 feet keel, \$1.50 ; from 25 feet keel upwards, \$2, and fishermen \$3 each.

1888, vessels \$1.50 per ton, one half each to owner and crew. Boats, the same as in 1885, 1886 and 1887.

1889, 1890 and 1891, vessels \$1.50 per ton as in 1888. Boats \$1 each. Boat fishermen \$3.

1892, vessels \$3 per ton, one half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1893, vessels \$2.90 per ton, paid as formerly. Boats \$1 each. Boat fishermen \$3.

1894, vessels \$2.70 per ton, distributed as in previous years. Boats \$1 each. Boat fishermen \$3.

1895, vessels \$2.60 per ton, half each to owner and crew. Boats \$1 each. Boat fishermen \$3.

1896, vessels \$1 per ton, which was paid to the owners, and vessel fishermen \$5 each, clause 5 of the regulations having been amended accordingly. Boats \$1 each, and boat fishermen \$3.50 per man.

1897, vessels \$1 per ton, and vessel fishermen \$6 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1898, vessels \$1 per ton, and vessel fishermen \$6.50 each. Boats \$1 each, and boat fishermen \$3.50 per man.

1899, vessels \$1 per ton and vessel fishermen \$7 each. Boats \$1 each, and boat fishermen \$3.50 per man.

Since 1882, 14,643 vessels, totalling a tonnage of 529,388 tons, have received the bounty. The total number of vessel fishermen which received bounty is 111,865, being an average of 7 men per vessel.

The total number of boats to which bounty was paid since 1882 is 251,403, and the number of fishermen 468,953. Average number of men per boat, 2.

The highest bounty paid per head to vessel fishermen was \$21.75 in 1893 ; the lowest 83 cents, while the highest to boat fishermen was \$4, the lowest \$2.

The general average paid per head is \$4.89.

COMPARATIVE STATEMENT by Provinces for the Years 1882 to 1899, inclusive, showing :—
(1) Total number of Fishing Bounty Claims received and paid by the Department of Marine and Fisheries.

YEAR.	NOVA SCOTIA.		NEW BRUNSWICK.		P.E. ISLAND.		QUEBEC.		TOTAL.	
	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.	Received.	Paid.
1882.....	6,730	6,613	1,257	1,142	1,169	1,100	3,162	3,117	12,318	11,972
1883.....	7,171	7,076	1,693	1,579	1,138	1,106	3,602	3,325	13,604	13,086
1884.....	7,007	6,930	1,252	1,224	923	885	3,470	3,429	12,652	12,468
1885.....	7,646	7,599	1,609	1,588	1,117	1,025	3,943	3,912	14,315	14,124
1886.....	7,639	7,702	1,767	1,763	1,131	1,080	4,275	4,355	14,812	14,900
1887.....	8,262	8,227	1,975	1,958	1,201	1,126	4,138	4,105	15,576	15,416
1888.....	8,481	8,429	2,065	2,026	1,153	834	4,328	4,310	16,027	15,599
1889.....	8,816	8,523	2,428	2,392	1,211	1,511	4,664	4,652	17,119	17,078
1890.....	9,337	9,429	2,522	2,469	1,352	1,257	4,860	4,804	18,071	17,959
1891.....	10,242	10,063	2,831	2,084	1,482	1,446	5,108	4,913	19,663	18,506
1892.....	8,272	8,186	1,067	1,001	1,065	1,051	4,425	4,204	14,829	14,442
1893.....	7,926	7,844	967	881	1,027	1,012	4,059	3,898	13,979	13,635
1894.....	8,640	8,600	925	911	983	963	3,948	3,876	14,496	14,350
1895.....	8,835	8,825	979	975	1,009	1,025	3,904	3,955	14,727	14,780
1896.....	8,597	8,562	1,137	1,064	1,111	1,120	4,366	4,229	15,211	14,975
1897.....	8,450	8,418	1,042	991	1,175	1,171	4,180	4,149	14,847	14,729
1898.....	8,446	8,347	934	917	1,143	1,145	4,171	4,092	14,679	14,501
1899.....	7,894	7,754	849	825	1,016	947	4,134	4,102	13,893	13,628
Totals.	148,391	147,127	27,299	25,790	20,406	19,804	74,722	73,427	270,818	266,148

(2) NUMBER of vessels, tonnage and number of men which received Bounty in each year.

YEAR.	NOVA SCOTIA.			NEW BRUNSWICK.			PRINCE EDWARD ISLAND.			QUEBEC.			TOTAL.		
	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.	No. of Vessels.	Tonnage.	No. of Men.
1882.....	588	22,841	5,343	120	2,171	531	15	389	74	63	2,210	538	786	27,611	6,486
1883.....	700	29,788	6,238	126	2,102	496	16	450	66	62	2,236	443	904	34,576	7,243
1884.....	700	29,828	6,327	139	2,289	560	16	582	92	56	1,965	382	911	34,664	7,361
1885.....	629	27,709	5,897	128	2,120	496	19	597	113	55	1,791	317	831	32,217	6,823
1886.....	562	25,375	5,022	145	2,628	520	32	1,071	215	52	1,730	320	791	30,804	6,077
1887.....	566	24,520	4,900	154	2,889	563	38	1,677	338	54	1,883	334	812	30,969	6,135
1888.....	589	26,008	5,450	150	2,545	544	37	1,245	246	51	1,842	388	827	31,640	6,631
1889.....	597	27,123	5,684	153	2,590	565	35	1,274	239	48	1,729	330	833	32,716	6,818
1890.....	540	23,955	4,935	133	2,129	447	32	1,002	203	34	1,182	220	739	28,268	5,805
1891.....	527	22,780	4,618	124	2,051	411	27	778	155	27	924	168	705	26,533	5,352
1892.....	507	22,279	4,611	108	1,683	343	30	983	139	23	803	159	668	25,748	5,252
1893.....	536	23,195	4,780	210	2,922	634	27	910	151	32	952	179	805	27,979	5,744
1894.....	602	24,735	5,077	238	3,189	721	21	594	114	38	1,066	178	899	29,584	6,090
1895.....	603	25,018	5,184	238	3,107	764	27	769	129	39	1,262	173	907	30,156	6,250
1896.....	553	23,415	4,607	250	3,337	800	23	656	114	36	1,143	144	862	28,551	5,665
1897.....	507	21,323	4,829	239	3,079	816	20	490	109	24	833	116	790	25,725	5,870
1898.....	508	20,868	4,840	239	3,155	859	24	561	125	16	524	77	784	25,108	5,901
1899.....	519	22,538	5,323	238	3,131	885	15	373	76	17	497	78	789	26,539	6,362
Totals.	10,333	443,298	93,665	3,132	47,117	10,955	454	14,401	2,701	727	24,572	4,544	14,643	529,388	111,865

SESSIONAL PAPER No. 22

(3) NUMBER of Boats and boat fishermen which received Bounty in each year.

Year.	NOVA SCOTIA.		NEW BRUNSWICK.		P. E. ISLAND.		QUEBEC.		TOTAL.	
	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.	No. of Boats.	No. of Men.
1882.....	6,043	12,130	1,024	2,530	1,087	3,070	3,071	5,716	11,225	23,446
1883.....	6,458	13,553	1,453	3,309	1,098	3,106	3,226	6,188	12,275	26,156
1884.....	6,257	12,669	1,086	2,505	869	2,346	3,344	6,416	11,556	23,936
1885.....	6,970	13,396	1,460	3,254	1,006	2,606	3,857	7,485	13,293	26,741
1886.....	7,140	13,351	1,618	3,567	1,048	2,547	4,303	7,981	14,109	27,446
1887.....	7,662	13,997	1,804	3,994	1,088	2,711	4,051	7,550	14,605	28,252
1888.....	7,840	14,115	1,876	4,148	797	2,141	4,259	7,852	14,772	28,256
1889.....	7,926	14,118	2,237	5,032	1,475	3,568	4,602	8,807	16,240	31,525
1890.....	8,886	15,738	2,324	5,242	1,192	3,024	4,766	9,241	17,168	33,245
1891.....	9,525	16,552	1,928	4,126	1,383	3,427	4,865	9,402	17,701	33,507
1892.....	7,679	12,307	893	1,765	1,021	2,047	4,181	7,693	13,774	23,812
1893.....	7,308	11,748	671	1,314	985	1,962	3,866	7,245	12,830	22,269
1894.....	7,956	12,899	661	1,281	913	1,813	3,821	7,139	13,351	23,132
1895.....	8,222	13,106	737	1,434	998	2,141	3,916	7,877	13,873	24,558
1896.....	8,008	12,454	814	1,553	1,095	2,126	4,189	7,688	14,106	23,821
1897.....	7,911	12,542	752	1,351	1,151	2,147	4,125	7,572	13,939	23,612
1898.....	7,872	12,438	678	1,237	1,121	2,199	4,076	7,627	13,747	23,501
1899.....	7,235	11,305	587	1,027	932	1,710	4,085	7,696	12,839	21,738
Totals.....	136,898	238,418	22,603	48,669	19,259	44,691	72,643	137,175	251,403	468,953

(4) TOTAL Number of men receiving Bounty in each year.

Year.	NOVA SCOTIA.	NEW BRUNSWICK.	P. E. ISLAND.	QUEBEC.	Total.
	No. of Men.	No. of Men.	No. of Men.	No. of Men.	
1882.....	17,473	3,061	3,144	6,254	29,932
1883.....	19,791	3,805	3,172	6,631	33,399
1884.....	18,996	3,065	2,438	6,798	31,297
1885.....	19,293	3,750	2,719	7,802	33,564
1886.....	18,373	4,087	2,762	8,301	33,523
1887.....	18,897	4,557	3,049	7,884	34,387
1888.....	19,565	4,692	2,390	8,240	34,887
1889.....	19,802	5,597	3,807	9,137	38,343
1890.....	20,673	5,689	3,227	9,461	39,050
1891.....	21,170	4,537	3,582	9,570	38,859
1892.....	16,918	2,108	2,186	7,852	29,064
1893.....	16,528	1,948	2,113	7,424	28,013
1894.....	17,976	2,002	1,927	7,317	29,222
1895.....	18,290	2,198	2,270	8,050	30,808
1896.....	17,061	2,353	2,240	7,832	29,486
1897.....	17,371	2,167	2,256	7,688	29,482
1898.....	17,278	2,096	2,324	7,704	29,402
1899.....	16,628	1,912	1,786	7,774	28,100
Totals	332,083	59,624	47,392	141,719	580,818

(5) TOTAL annual payments of Fishing Bounty.

Year.	Nova Scotia.	New Brunswick	P. E. Island.	Quebec.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1882.....	106,098 72	16,997 00	16,137 00	33,052 75	172,285 47
1883....	89,432 50	12,395 20	8,577 14	19,940 01	130,344 85
1884.....	104,934 09	13,576 00	9,203 96	28,004 93	155,718 98
1885.....	103,999 73	15,908 25	10,166 65	31,464 76	161,539 39
1886.....	98,789 54	17,894 57	10,935 87	33,283 61	160,903 59
1887.....	99,622 03	19,699 65	12,528 51	31,907 73	163,757 92
1888.....	89,778 90	18,454 92	9,092 96	32,858 75	150,185 53
1889.....	90,142 51	21,026 79	13,994 53	33,362 71	158,526 54
1890.....	91,235 64	21,108 33	11,686 32	34,210 72	158,241 01
1891.....	92,377 42	17,235 96	12,771 30	34,507 17	156,891 85
1892.....	109,410 39	10,864 61	9,782 79	29,694 35	159,752 14
1893.....	108,060 67	12,524 09	9,328 62	28,320 72	158,234 10
1894....	111,460 03	12,690 80	7,875 79	28,040 18	160,066 80
1895....	110,765 27	12,919 32	9,285 13	30,598 27	163,567 99
1896....	98,048 95	13,602 88	9,745 50	32,992 44	154,389 77
1897.....	102,083 50	13,454 50	9,809 00	32,157 00	157,504 00
1898.....	103,730 00	13,746 00	10,188 00	31,795 00	159,459 00
1899.....	106,598 50	13,514 50	7,822 00	32,065 00	160,000 00
Totals.....	1,816,568 39	277,613 37	188,931 07	558,256 10	2,841,368 93

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty for the Year 1899.

PROVINCE OF NOVA SCOTIA.

ANNAPOLIS COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
88270	Alice May	St. John.....	10	Ambrose Sabeau.....	Port Lorne.,...	3	31 00
88396	Brant	Windsor.....	12	Handley Lewis.....	"	3	33 00
107291	Elva J. Hayden...	Annapolis	65	David Hayden.....	Thorne's Cove ..	11	142 00
100315	Freddie A.....	Yarmouth.....	10	Norman Gregory.....	Parker's Cove...	4	38 00
36569	Hope	Halifax	34	Elias Hudson.....	"	7	83 00
83461	Josie L. Day.....	Digby.....	16	Albert Coates.....	Hillsburn	9	79 00
42089	Lily.....	St. Andrews....	10	James D. Aldred	Margaretsville..	3	31 00
100550	Martha D. McLean	Digby.....	49	John S. Hayden	Victoria Beach..	13	140 00
100020	Mayflower.....	Annapolis	12	George D. Corbett....	Port Lorne	2	26 00
83253	Rescue.....	"	17	Josiah Burrell	Clementsport.,..	7	66 00
37172	Richard Simmonds.	St. John.....	45	Norman Ray	Margaretsville..	5	80 00
100314	Sea Fox.....	Yarmouth.....	19	Israel W. Banks	Port Lorne	4	47 00
100548	Violetta	Digby.....	10	Bernard Longmire....	Hillsburn	5	45 00

ANTIGONISH COUNTY.

90642	Komaroff.....	Yarmouth	10	John Brow	Harb'rauBouche	2	24 00
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CAPE BRETON COUNTY.

100389	Annie F.....	Sydney.....	13	John Farrell.....	Main-à-Dieu....	4	41 00
100221	Baleka	Halifax	31	George Burge.....	North Sydney ..	8	87 00
100372	Betsy Jane.....	Sydney.....	11	Samuel Moore	Little Bras d'Or.	4	39 00
85381	Champion.....	"	19	John Williams	Louisburg	4	47 00
75571	Fanny	Liverpool	16	Aron Anesty	North Sydney ..	5	51 00
100383	Florence L.....	Sydney.....	10	Vital Arsenaault....	Little Bras d'Or.	4	38 00
107371	Highland Lass....	"	19	Roderick Beaton....	Point Aconi....	6	61 00
88513	Ida	"	11	Elias Leblanc.....	Little Bras d'Or.	3	32 00
100381	Katie B.....	"	24	John H. Burke	Little Loraine ..	7	73 00
100840	Maritime.....	Lunenburg	59	R. E. Burke.....	Ingonish.....	10	129 00
92600	Merit ,.....	Sydney.....	13	Alex. Leblanc	Little Bras d'Or.	6	55 00
107360	Ovando	"	11	Patrick Campbell....	Main-à-Dieu....	3	32 00
107358	Olive A.....	"	19	R. B. Spencer	Port Morien....	5	54 00
100566	Rob S	Halifax	21	Ambrose Forward....	Lingan.....	6	63 00
103609	Verbena.....	Sydney.....	27	Abram Grant.....	Gabarus	3	48 00

CUMBERLAND COUNTY.

80001	Florence	St. John.....	15	Lewis R. Morris.....	Parrsboro'	3	36 00
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DIGBY COUNTY.

83431	Acadian	Weymouth	32	George H. Stevens....	Freeport.....	11	109 00
75888	Annie.....	Yarmouth	22	W. H. Anderson.....	Digby.....	9	85 00
72978	Annie Coggins	Digby.....	22	Thomas Milner.....	"	6	64 00
94696	Annie M. Sproul ..	"	70	Orbin Sproule.....	"	14	168 00
90660	Alice May.....	Yarmouth	18	Edward Haines.....	Freeport.....	9	81 00

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

DIGBY COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid	Amount of Bounty paid.
							\$ cts.
88598	Alph B. Parker....	St. John.....	39	Holland Outhouse....	Tiverton.....	12	123 00
100547	B. & C.	Digby.....	14	Loren Perry.....	Freeport.....	5	49 00
94698	Carrie H.	".....	20	James Gower.....	Westport.....	8	76 00
94704	Charles Haskell....	".....	67	Howard Anderson....	Digby.....	14	165 00
74331	Condor.....	".....	11	Howard Titus.....	Westport.....	6	53 00
103181	Curlew.....	Shelburne.....	63	Joseph F. Milberry...	Digby.....	17	182 00
107474	Dorothy.....	Digby.....	59	M. G. Crocker.....	Freeport.....	13	150 00
80790	Electric Light.....	".....	34	Lawson Keans.....	Digby.....	4	62 00
77740	Elmer.....	".....	15	James Ellis, jr.....	".....	7	64 00
103749	Emerald.....	".....	29	John H. Syda.....	".....	8	85 00
94707	Ernest F. Norwood..	".....	79	Joseph E. Snow.....	".....	16	191 00
75757	Etta.....	Yarmouth.....	17	Clarence Webber....	Westport.....	3	38 00
85550	Fair Play.....	".....	11	John A. Powell.....	".....	2	25 00
74329	Fairy Queen.....	".....	13	Wallace Coggins.....	".....	6	55 00
75601	Flash.....	Digby.....	10	James A. Peters.....	".....	5	45 00
100891	Fleur de Lis....	Weymouth.....	17	George E. Mallett....	Plympton.....	4	45 00
80798	Freddie G.....	Digby.....	18	George Gower.....	Westport.....	8	74 00
77963	Freman Colgate..	St. Andrews....	26	Thomas Hicks.....	".....	10	96 00
83260	Gazelle.....	Digby.....	20	Orbin Sproule.....	Digby.....	9	83 00
90436	Genesta.....	Barrington.....	32	George Denton.....	Westport.....	12	116 00
94835	Georgie Linwood..	Digby.....	25	Herbert Johnson....	Digby.....	9	88 00
107472	Goldie G.....	".....	15	Watson Guest.....	".....	8	71 00
100544	Helen Maud.....	".....	26	Chas. McDormand....	Westport.....	8	82 00
107471	Ina Brooks.....	".....	22	William H. Brooks....	Freeport.....	9	85 00
100064	Isma.....	St. John.....	31	Thomas Hicks.....	Westport.....	10	101 00
94693	John H. Kennedy..	Digby.....	54	John W. Snow.....	Digby.....	7	103 00
77957	Kedron.....	Annapolis.....	22	Ansel Snow.....	".....	7	71 00
80881	Lena May.....	St. Andrews....	18	Orbin Sproule.....	".....	8	74 00
59388	Letitia.....	".....	10	Peter H. Belliveau....	Belliveau's Cove	5	45 00
85534	Lloyd.....	Yarmouth.....	23	W. H. Anderson.....	Digby.....	9	86 00
85690	Lora T.....	Digby.....	15	Judson Thurber.....	Freeport.....	6	57 00
100487	Mabel B.....	".....	57	M. G. Crocker.....	".....	12	141 00
85682	Malapert.....	".....	23	John Ring.....	Digby.....	9	86 00
88583	Mary Odell.....	Yarmouth.....	14	John T. Therrio.....	Meteghan.....	7	63 00
100574	Melrose.....	Lunenburg.....	71	Augustus Haycock....	Westport.....	16	183 00
92640	Minerva.....	".....	80	E. C. Bowers.....	".....	13	171 00
85533	Minnie C.....	Yarmouth.....	12	Milton Haines.....	Freeport.....	7	61 00
80794	Minnie C.....	Digby.....	18	Charles Bailey.....	Westport.....	8	74 00
100895	New Home.....	Weymouth.....	31	Moïse Thibaudeau....	Church Point...	8	87 00
94825	On Time.....	".....	19	Henry Glaven.....	Westport.....	9	82 00
100515	Packet.....	Parrsboro.....	49	Norinan Robbins.....	Tiverton.....	13	140 00
100319	Rob Roy.....	Yarmouth.....	12	Moses Therrio.....	Meteghan.....	6	54 00
100539	Rowena.....	Digby.....	10	Warren Snow.....	Digby.....	4	38 00
100609	Swan.....	Shelburne.....	56	Edward Haines.....	Freeport.....	13	147 00
85558	S. A. Crowell.....	Yarmouth.....	23	Wallace Gower.....	Westport.....	8	79 00
94694	Utah & Eunice....	Digby.....	33	Milton Haines.....	Freeport.....	9	96 00
103711	Venite.....	Yarmouth.....	16	Stephen Doucett.....	Cape Cove.....	6	58 00
94832	Venus.....	St. Andrews....	42	Milton Haines.....	Freeport.....	13	133 00
100543	W. Parnell O'Hara.	Digby.....	79	William Snow.....	Digby.....	20	219 00

GUYSBORO COUNTY.

103322	Bonnie Brier Bush.	Pt. Hawkesbury.	38	Henry O'Neill.....	Auld's Cove....	6	80 00
103321	Christie Campbell.	".....	55	Thomas H. Peeples...	Mulgrave.....	8	111 00
38418	Dolphin.....	Arischat.....	36	William S. Peart.....	Guysboro.....	2	50 00
80994	Esperance.....	Guysboro.....	10	Charles S. Horton....	Half Island Cove	5	45 00
83180	Friend.....	Lunenburg.....	17	Luke Mannette, sr....	Larry's River...	7	66 00
94963	Golden Seal....	Halifax.....	32	Edward B. Pelrine....	".....	5	67 00
100815	Happy Home.....	Barrington.....	10	James W. Feltmate...	White Head....	6	52 00
100161	Hilda Maude.....	Pt. Hawkesbury	46	John G. Murray.....	Port Richmond.	10	116 00

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*GUYSBORO COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
57715	John Lawrence....	Halifax.....	23	Henry A. Richard....	Charlo's Cove...	7	72 00
100835	Lottie B.....	Lunenburg.....	12	R. T. Mathews.....	Canso.....	6	54 00
100449	Lucy J. Warren....	Canso.....	58	William Dicks.....	White Head....	8	114 00
103173	Mabel.....	Shelburne.....	21	Joseph Fougère.....	Larry's River...	7	70 00
75577	Mary Ann Bell....	Lunenburg.....	33	Joseph O'Neill.....	Auld's Cove....	5	68 00
103532	Maria A.....	Halifax.....	22	Chas. A. Crittenden..	Mulgrave.....	2	36 00
103859	Mary May.....	".....	23	Benjamin David.....	Port Felix.....	11	100 00
100446	Minnie May.....	Canso.....	12	William L. Dort.....	Sandy Cove....	5	47 00
100450	Minto.....	".....	18	William E. O'Hara....	Canso.....	6	60 00
103323	Nita.....	Pt. Hawkesbury	22	Louis Maguire.....	Mulgrave.....	2	36 00
80970	Orion.....	Halifax.....	24	Hubert Richard.....	Charlo's Cove..	6	66 00
100231	Pearl.....	".....	17	Martin Meagher.....	Canso.....	3	38 00
75892	Peter Mitchell....	Pt. Hawkesbury	26	Michael Power.....	Mulgrave.....	5	61 00
92575	Robinnetta.....	Halifax.....	14	John Leary.....	Queensport.....	5	49 00
100444	Stella May.....	Canso.....	12	James Meagher.....	Canso.....	5	47 00
107318	St. Stephen.....	Halifax.....	19	Vincent Pelrine.....	Port Felix.....	8	75 00
100448	Surprise.....	Canso.....	15	John J. Meagher.....	Canso.....	4	43 00
197991	Two Brothers.....	".....	14	Frederick Gello.....	Port Felix.....	5	49 00

HALIFAX COUNTY.

107313	Alice A.....	Halifax.....	16	Alexander Fillis.....	W. Chezzetcook..	3	37 00
103507	Annie.....	".....	16	Charles Covey.....	Indian Harbour..	4	44 00
90495	Annie S.....	".....	34	J. J. Scott.....	East Dover.....	7	83 00
100604	Bella H. McKinnon	Shelburne.....	35	Wm. H. Henneberry..	Halifax.....	8	91 06
103858	B. & B. Holland...	Halifax.....	26	Richard Holland.....	Duncan's Cove..	8	82 00
94662	Bessie Florence...	".....	12	Charles Twohig.....	Pennant.....	4	40 00
103537	Bonacord.....	".....	12	James W. Smith.....	Sambro.....	3	33 00
90721	Brilliant Star....	".....	36	Peter & John Hartlin..	East Jeddore...	8	92 00
96799	Catherine A. C. ...	".....	17	Hezekiah Cleveland..	West Dover....	5	52 00
103852	Dawn.....	".....	13	Jas. & Thos. Parker..	Owl's Head.....	3	34 00
59484	Day Spring.....	".....	36	George L. Baker.....	West Jeddore...	9	99 00
90481	Ella D.....	".....	32	Archibald Darrach, sr.	Herring Cove...	11	109 00
90726	Ellen Maud.....	".....	16	A. Wilson & Son.....	Halifax.....	5	51 00
85738	Emma F.....	".....	13	Eliza Cook.....	".....	4	41 00
96785	Eva M. B.....	".....	45	Daniel Bonang.....	W. Chezzetcook..	8	101 00
100247	Fairy Queen.....	".....	11	Geo. H. Nickerson....	Pennant.....	4	39 00
85644	Flora.....	".....	42	Patrick Scallion.....	Herring Cove...	10	112 00
100481	Florence.....	Lunenburg.....	29	Simeon Boutilier....	French Village..	5	64 00
100259	Florence G.....	Halifax.....	15	Caleb Gray.....	Sambro.....	3	36 00
80996	Gertie Belle.....	Guysboro.....	15	James Yorke.....	Eastern Passage.	3	36 00
97088	Glendale.....	Lunenburg.....	38	Charles Neiforth.....	Seaforth.....	14	136 00
100228	Golden Dawn.....	Halifax.....	46	George A. Conrod.....	E. Chezzetcook..	12	130 00
103544	Grace D.....	".....	10	James Marryatt.....	Pennant.....	3	31 00
88220	Grandee.....	".....	14	John P. Slaunwhite...	Terence Bay....	4	42 00
90489	Green Leaf.....	".....	44	Isaac Lapierre, s. Pros.	W. Chezzetcook..	8	100 00
83306	I. O. N. A.....	".....	26	Andrew Sullivan....	Herring Cove...	8	82 00
100216	Katie M.....	".....	11	Charles Nelson.....	Halifax.....	3	32 00
83402	Louisa Maud.....	".....	21	Albert Manuel.....	Peggy's Cove...	6	63 00
94665	Louis Luby.....	".....	41	James Lapierre.....	W. Chezzetcook..	7	90 00
100580	Maggie E. C.....	Lunenburg.....	20	David Covey.....	Hackett's Cove..	7	69 00
96805	Maggie May.....	Halifax.....	62	Jeremiah Fillis.....	W. Chezzetcook..	10	132 00
85664	Mary E.....	".....	14	Andrew Twohig.....	Pennant.....	4	42 00
100227	May.....	".....	10	Thomas E. Little.....	Terence Bay....	4	38 00
69213	May Fly.....	".....	12	John Neville.....	Halifax.....	5	47 00
103182	Meta.....	Shelburne.....	18	James Reyno.....	Herring Cove...	7	67 00
100254	Myrtle M. Gray ..	Halifax.....	19	James Gray.....	Pennant.....	5	54 00
85665	Nellie D.....	".....	12	James Crooks.....	Halifax.....	4	40 00
94667	Nettie M. G.....	".....	32	Matthew Lynch, sr....	Ferguson's Cove.	8	88 00
103539	Neva.....	".....	11	Ephraim Marryatt....	Pennant.....	4	39 00

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

HALIFAX COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
80841	Nina	Halifax	13	Joseph Parker.....	Owl's Head.....	2	27 00
100245	Oracle	"	18	W. McC. Boak . . .	Halifax.....	3	39 00
85562	Oresa.....	"	14	Lawson B. Corkum....	East Jeddore...	4	42 00
100241	Pansy	"	32	George Schnair	Pennant	7	81 00
92571	Primrose.....	"	14	Angus Gray.....	"	5	49 00
100474	R. Beatrice.....	"	19	J. Morash, sr.....	West Dover.....	7	68 00
75575	Rising Dawn.....	Lunenburg	18	Frederick Boutilier....	Indian Harbour.	4	46 00
96806	Rising Sun.....	Halifax	28	Richard Christian....	Prospect	5	63 00
69082	Saint Agnes.....	"	38	Ebenezer Homans....	Clam Harbour..	4	66 00
100255	Seaflee	"	12	James Stevens.....	Owl's Head.....	4	40 00
64869	Sarah L. Oxner....	"	34	Edward Hayes.....	Herring Cove...	15	139 00
100218	Sarah M. W.....	"	14	Z. Wambolt	Indian Harbour.	5	49 00
103538	Staletta.....	"	25	W. Charles Henley ..	Spry Bay.....	2	39 00
103193	Startle.....	Liverpool	11	Chas. F. Martin	Halifax.....	5	46 00
77836	T. W. Smith.....	Halifax	35	Charles Beaver.....	Spry Bay.....	3	56 00
75833	Twilight.....	"	14	Leander Hubly.....	Indian Harbour.	5	49 00
103869	Uganda.....	"	14	James B. Stoddard....	Ship Harbour...	4	42 00
96781	Venture.....	"	43	Edward Dempsey.....	Herring Cove...	13	134 00
61904	Water Lily.....	"	14	Isaac Morash.....	West Dover.....	4	42 00
92578	Willetta.....	"	12	Joseph Gray.....	Sambro	5	47 00
100226	Willie H. Crosby..	"	65	James Julien.....	W. Chezzetcook.	17	184 00
85378	Zephyr.....	"	16	Robert Slaunwhite (John P.).....	Terence Bay....	5	51 00

HANTS COUNTY.

75614	Fawn	Digby	17	Henry E. Ogilvie.....	Summerville:...	2	31 00
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INVERNESS COUNTY.

71302	Alice.....	Charlottetown...	10	Pepin Chaisson	Belle Côte.....	7	59 00
96778	Campania.....	Pt. Hawkesbury.	11	Robin, Collas & Co., Ltd	Eastern Harbour	5	46 00
103313	Catherine.....	"	10	Séverin Chiasson.....	"	4	38 00
103452	Charlotte	"	73	David Walker	Pt. Hawkesbury.	13	164 00
83244	Claribel.....	Charlottetown...	19	Charles Doucet.....	Eastern Harbour	7	68 00
103325	Elizabeth Ann....	Pt. Hawkesbury.	11	David Bourgeois.....	"	4	39 00
96768	Elizabeth Ann....	"	11	Robin, Collas & Co., Ltd	"	4	39 00
96774	Florence.....	"	11	Siméon Bellefontaine..	"	5	46 00
103317	Flying Star	"	11	"	"	4	39 00
103316	Laura	"	10	Ubalde Bourgeois ..	"	4	38 00
103312	Laura	"	13	Amédée Aucoin.....	Belle Côte.....	7	62 00
103315	Lillie	"	12	Peter Fiset.	Point Cross.....	4	40 00
103318	Little Heir.....	"	19	Michel Maillet.....	Eastern Harbour	6	61 00
96775	Louise.....	"	11	Siméon Bellefontaine..	"	4	39 00
96779	Majestic	"	12	Robin, Collas & Co., Ltd	"	5	47 00
96771	Marie	"	10	John Roach.....	"	4	38 00
96777	Marie Joseph.....	"	11	Victor Roach.....	"	4	39 00
103314	Mary	"	10	Paul J. Aucoin	"	4	38 00
96769	Mary Lambert....	Port Hawkesb'ry	11	Lue Chiasson.....	Eastern Harbour	5	46 00
69125	May Flower.....	Halifax.	20	Hyacinthe Chiasson...	"	6	62 00
103326	Mizpah	Port Hawkesb'ry	10	George Le Brun.....	"	5	45 00
96770	O. L. B.	"	12	David Chiasson....	Grand Étang....	4	40 00
96962	Sunrise	Yarmouth	18	Duncan J. Gillis	Seaside	2	32 00
96773	Virgin	Port Hawkesb'ry	10	Michael Ramard.....	Eastern Harbour	5	45 00
96776	Willie B.....	"	11	Emilien Roach.....	Point Cross.....	4	39 00

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

KING'S COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
83261	Economist	Digby	14	Jesse Parker.....	Hall's Harbour .	3	35 00

LUNENBURG COUNTY.

94790	Abana	Lunenburg	80	James Romkey.....	Ritcey's Cove...	16	192 00
100839	Acalia	"	34	Nathan Silver.....	Lunenburg	6	76 00
94783	Alaska	"	80	J. F. Risser.....	Ritcey's Cove...	17	199 00
107644	Albertha.....	"	80	Amiel Corkum.....	La Have.....	17	199 00
100489	Algoma	"	56	Jeffrey Publicover	Getson's Cove...	15	161 00
107124	Alma Nelson.....	"	80	J. William Young	Lunenburg	20	220 00
94778	Argosy	"	80	Charles Smith	"	17	199 00
100472	Arcana.....	"	80	Alexander Knickle....	"	17	199 00
103205	Aroostook	Liverpool	67	John Geldert.....	"	13	158 00
103495	Athlon.....	Lunenburg	80	J. N. Rafuse.....	Conquerall Bank	17	199 00
100170	Atlanta	"	80	Freeman Anderson....	Lunenburg	17	199 00
103745	Avis	"	80	A. V. Conrad.....	Parks Creek....	17	199 00
103501	Barcelona.....	"	80	John M. Ritcey.....	Ritcey's Cove...	17	199 00
103755	Basil M. Geldert .	"	80	John B. Young.....	Lunenburg	17	199 00
107130	Beatrice L. Corkum	"	80	Wm. C. Smith.....	"	17	199 00
103430	Beluga.....	"	80	A. V. Conrad.....	Park's Creek ...	15	185 00
94651	Bessie A.....	"	80	W. N. Reinhardt	La Have.....	17	199 00
103503	B. G. Anderson....	"	80	Thomas Hamm.....	Lunenburg	17	199 00
100838	Blanche A. Colp...	"	80	C. U. Mader.....	Mahone Bay....	17	199 00
103421	Blenheim	"	80	Charles Smith	Lunenburg	17	199 00
94782	Bona Fides.....	"	80	J. Joseph Rudolf	"	17	199 00
96828	Bonanza	"	80	Charles L. Silver ..	"	17	199 00
100848	Britannia	"	59	Lambert Lohnes.....	Middle La Have	14	157 00
100571	Britannia	"	80	Charles Smith	Lunenburg	17	199 00
94645	C. A. Chisholm....	"	80	Abraham Ernst.....	Mahone Bay....	13	171 00
97084	Calla Lily.....	"	62	Simon Hirtle	Middle La Have	13	153 00
103427	Cambrian	"	60	Dean Fralick	Pleasantville....	15	165 00
103502	Carlraine.....	"	80	Alvin Himmelman....	Rose Bay.....	18	206 00
100823	Carrie.....	"	60	Adnah Burns.....	Dayspring.....	13	151 00
97081	Carrie.....	"	80	Artemas Zink.....	Ritcey's Cove...	18	206 00
107115	Cayuga	"	80	Simon Hirtle	Middle La Have	18	206 00
100579	Citizen.....	"	80	Murdock McGregor...	Ritcey's Cove...	17	199 00
90869	Clara E. Mason....	"	80	Richard Smith.....	Lunenburg	15	185 00
103415	Clarence Smith....	"	80	G. A. Smith.....	"	17	199 00
107122	Collector	"	80	W. N. Reinhardt....	La Have.....	17	199 00
103759	Columbia	"	80	J. Alexander Silver...	Lunenburg	18	206 00
100834	Comrade.....	"	80	W. N. Reinhardt....	La Have.....	17	199 00
103419	Cordova.....	"	80	Charles Smith	Lunenburg	14	178 00
100159	C. U. Mader.....	"	80	C. U. Mader.....	Mahone Bay....	17	199 00
100483	Curfew.....	"	49	J. D. Sperry.....	Petite Rivière...	12	133 00
107112	Daisy Linden	"	80	Abraham Ernst.....	Mahone Bay....	17	199 00
88355	D. A. Mader.....	"	80	C. U. Mader.....	"	13	171 00
90834	Diego.....	Port Medway...	27	Harris Conrad.....	Vogler's Cove...	10	97 00
97089	Dictator.....	Lunenburg	80	S. Watson Oxner.....	Lunenburg	17	199 00
107649	D. M. Owen.....	"	72	J. N. Rafuse.....	Conquerall Bank	17	191 00
100841	Dora.....	"	80	Lewis Hirtle.....	Lunenburg	17	199 00
103506	Ebro.....	"	75	J. William Young....	"	15	180 00
107127	Ellen L. Maxnor...	"	80	H. W. Adams.....	"	19	213 00
83308	Ella.....	Liverpool	10	J. C. Hanson.....	Mahone Bay....	1	17 00
103424	Elva M.....	Lunenburg	80	C. U. Mader.....	"	17	199 00
103492	Emily L.....	"	10	Wesley Stevens.....	West Shore.....	3	31 00
107123	Emulator.....	"	80	John M. Ritcey. ...	Ritcey's Cove...	17	199 00
88356	Energy.....	"	80	C. U. Mader.....	Mahone Bay....	17	199 00
94659	Enterprise.....	"	80	William Cleversy	Pleasantville....	18	206 00
100151	Erminie	"	80	Thomas Hamm.....	Lunenburg	17	199 00
103429	Fern.....	"	70	Cyrus Walters.....	Middle LaHave.	16	182 00

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.]	No. of Crew paid.	Amount of Bounty paid.
							\$
103743	Flo. F. Mader.....	Lunenburg	80	C. U. Mader.....	Mahone Bay	18	206 00
100480	Gallant.....	"	57	Elias Richard, sr.....	Getson's Cove....	13	148 00
97083	Garland.....	"	51	J. D. Sperry.....	Petite Rivière....	9	114 00
90582	G. A. Smith.....	"	80	Eli Ritcey.....	Ritcey's Cove....	*	80 00
103411	Genevieve.....	"	80	Abraham Ernst....	Mahone Bay....	17	199 00
100825	Georgina.....	"	34	James Bell.....	Dublin Shore....	8	90 00
103505	Gladys May.....	"	80	Adam Selig.....	Vogler's Cove....	21	227 00
103753	Gladys B. Smith...	"	80	Benjamin C. Smith...	Lunenburg.....	19	213 00
103752	Glyndon	"	80	Elisha Wentzel.....	Ritcey's Cove....	19	213 00
100850	Grace.....	"	80	Daniel Getson.....	Getson's Cove....	17	199 00
90862	Grenada	"	80	S. Watson Oxner.....	Lunenburg	16	192 00
100488	Gurnet	"	56	Alvin Creaser.....	Ritcey's Cove....	11	133 00
96836	Gleaner.....	"	80	William C. Acker....	Lunenburg.....	17	199 00
107119	Harold J. Parks...	"	80	L. B. Currie.....	West Dublin....	17	199 00
103744	Harry Smith	"	80	J. H. Wilson.....	Lunenburg	17	199 00
107641	Hattie L. M.....	"	80	P. B. Zwicker.....	Mahone Bay	17	199 00
100569	Howard Young....	"	80	James Young.....	Lunenburg	18	206 00
107128	Huron	"	80	Henry Wilson	"	17	199 00
100490	Irene M. B.....	"	66	Eli Ernest.....	Mahone Bay	14	164 00
107116	Ivy.....	"	12	Joshua Ernst	Conquerall Bank	1	19 00
96830	J. A. Silver.....	"	80	Charles L. Silver....	Lunenburg	17	199 00
103414	Jeanie Myrtle....	"	80	John M. Ritcey.....	"	17	199 00
94785	J. C. Schwartz....	"	80	David Heisler.....	"	21	277 00
103491	Jennie May.....	"	80	Martin Westhaver....	"	15	185 00
107646	Jessie L. Smith....	"	80	Lemuel Smith.....	Lower LaHave..	20	220 00
100164	J. H. Ernst.....	"	80	S. Watson Oxner.....	Lunenburg	18	206 00
100837	J. M. Young.....	"	80	J. William Young....	"	17	199 00
94789	Joseph McGill....	"	80	David Ritcey.....	Ritcey's Cove....	18	206 00
107144	Klondyke	"	80	James Richard.....	Getson's Cove....	19	213 00
96838	La France.....	"	80	S. Watson Oxner.....	Lunenburg	16	192 00
96832	Laura M. Knock ..	"	80	Allan R. Morash....	"	17	199 00
103202	L. B. Currie.....	"	80	L. B. Currie.....	West Dublin....	17	199 00
94780	Lawrence	"	80	Abraham Ernst.....	Mahone Bay	20	220 00
94788	Lawrence C. Zwicker	"	80	"	"	15	185 00
96833	L. E. Young.....	"	80	Benjamin Anderson...	Lunenburg	17	199 00
107126	Lena F. Oxner....	"	80	James Gelbert.....	"	18	206 00
96827	Leopold.....	"	80	Ammon Ritcey....	Ritcey's Cove....	18	206 00
107129	Lilla B. Hirtle....	"	80	Benjamin Anderson...	Lunenburg	19	213 00
103760	Lillian.....	"	80	Elias Richard.....	Getson's Cove....	19	213 00
107113	L. Morton.....	"	60	Adam Selig.....	Vogler's Cove....	13	151 00
103496	Loreana Maud....	"	80	David Risser.....	Lunenburg	17	199 00
100830	Lorraine C.....	"	64	Steadman Corkum ...	Middle LaHave..	10	134 00
83316	Lottie	Port Medway...	80	Samuel E. Teel.....	Vogler's Cove....	11	157 00
103420	Luetta	Lunenburg	80	Isaac Mason	Lunenburg	18	206 00
107120	Madeira	"	80	Theophilus Creaser...	Ritcey's Cove....	20	220 00
103509	Maggie E. Z.....	"	70	Emanuel Zellars.....	Lunenburg.....	17	189 00
97100	Maggie M. W.....	"	80	Howard Wynacht....	"	17	199 00
100162	Magic	"	45	J. D. Sperry.....	Petite Rivière....	10	115 00
103425	Majestic	"	80	Ruben Ritcey.....	Ritcey's Cove....	17	199 00
94775	Malabar	"	80	R. H. Griffiths.....	Lunenburg	16	192 00
103413	Martello	"	65	Abraham Ernst.....	Mahone Bay	10	135 00
107652	Mascot	"	80	Charles Hewett....	Lunenburg	19	213 00
100849	Merl M. Parks	"	80	A. V. Conrad.....	Park's Creek....	17	199 00
96840	Mayflower	"	60	Robert Dawson.....	Bridgewater....	11	137 00
103426	Melbourne	"	61	Eber Gerhardt.....	Middle LaHave..	15	166 00
107650	Mildred.....	"	80	Abraham Ernst.....	Mahone Bay	19	213 00
90823	Miletus	"	80	John Shankle.....	Middle LaHave..	14	178 00
107111	Millie Mace.....	"	80	William C. Smith....	Lunenburg	19	213 00
100153	Milo.....	"	80	J. William Young ...	"	17	199 00
103416	Minnie J. Smith...	"	80	William C. Smith....	"	18	206 00
103757	Minnie J. Heckman	"	80	Murdock McGregor...	Ritcey's Cove....	21	227 00

* No crew entitled.

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*LUNENBURG COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
103412	Minnie B.	Lunenburg.	25	Phineas Richard.....	Pentz Settlem't	9	88 00
107121	Minto	"	80	Daniel Zinck.....	Lunenburg	20	220 00
103422	Mischief	"	80	Thomas A. Wilson....	Bridgewater....	17	199 00
92632	Monarch	"	80	Allan R. Morash	Lunenburg	15	185 00
103758	Muriel	"	80	G. N. C. Hawkins	"	19	213 00
94966	Nicanor	"	79	Davis Westhaver.....	"	15	184 00
100485	Nightingale	"	52	John Haughn.....	Pentz Settlem't	13	143 00
92636	Nonpareil	"	80	John Zinck.	Lunenburg . . .	17	199 00
88242	Nova Zembla.....	"	79	C. U. Mader.....	Mahone Bay....	15	184 00
94786	Ontario	"	80	Thomas Hamm.....	Lunenburg	15	185 00
107643	Olive Louise	"	80	Alexander Knickle....	"	17	199 00
94779	O. P. Silver. ...	"	80	Charles L. Silver....	"	17	199 00
94641	Ovando	"	80	Jeffrey Publicover....	Getson's Cove...	15	185 00
100836	Panama	"	80	Henry Adams	Lunenburg . . .	17	199 00
107642	Pavia	"	80	A. V. Conrad.....	Park's Creek....	17	199 00
103747	Perfect	"	54	John Schmeisser.....	Middle La Have.	13	145 00
100483	Puma	"	58	Simon Pentz	"	16	170 00
94774	Puritan	"	80	Theophilus Creaser....	Ritcey's Cove...	17	199 00
100473	Rapture	"	57	Alvin Moser.....	Middle South...	16	169 00
107653	Renown	"	80	William C. Smith....	Lunenburg	17	199 00
107647	Roc	"	80	C. U. Mader.....	Mahone Bay....	15	185 00
96834	Robert F. Mason ..	"	80	Martin Mason.. . . .	Lunenburg	18	206 00
107125	Roma	"	80	Isaac Zink.....	Ritcey's Cove...	19	213 00
100572	Rowena.....	"	51	William Schmeisser...	Middle La Have.	14	149 00
90868	Sadie	"	79	G. N. C. Hawkins	Lunenburg	16	191 00
100471	Secret	"	80	John B. Young.....	"	17	199 00
88349	Senovar	"	80	Nathan Hiltz.....	Martin's River..	15	185 00
100165	Snow Queen	"	67	Leander Misener.....	Martin's Point..	15	172 00
94962	Stella E.....	"	80	Norman Rafuse.....	Conquerall Bank	*	80 00
107117	St. Clair	"	80	Charles Smith	Lunenburg	18	206 00
103500	St. Helena	"	80	Howard Wynacht....	"	17	199 00
107648	St. Vincent	"	78	Cyrus Walters.....	Middle La Have.	19	211 00
100829	Stranger	"	11	Garrett Richard ...	Pleasantville...	1	18 00
103754	Talmouth	"	80	F. S. Messenger.....	Petite Riviere...	19	213 00
107651	Torata	"	80	J. William Young ...	Lunenburg	19	213 00
92623	Torridon	"	80	Isaac Heckman.....	"	18	206 00
100575	Tyler	"	54	W. A. Zwicker.....	"	13	145 00
103742	Unique	"	80	Abraham Ernst.....	Mahone Bay....	17	199 00
97098	Urania	"	80	David Heisler.....	Lunenburg	18	206 00
103417	Uruguay	"	80	Elijah Ritcey.....	Ritcey's Cove...	17	199 00
83164	Valiant	"	80	Thomas A. Cook.....	Lunenburg	16	192 00
100821	Venus	"	76	J. W. Mills.....	Mahone Bay....	14	174 00
103504	Viking.....	"	80	Amiel Corkum.....	La Have.....	16	192 00
94776	Volunteer	"	80	Murdock McGregor...	Ritcey's Cove...	17	199 00
61921	W. C. Wier.. . . .	Halifax	41	Freeman Young	Tancook.....	5	76 00
100152	Werra	Lunenburg	80	E. Fenwick Zwicker...	Lunenburg	17	199 00
96829	Wisteria	"	80	Freeman Anderson....	"	17	199 00
107645	Yosemite.....	"	80	Kenneth Silver.. . . .	Dayspring	16	192 00
100833	Yucatan	"	80	J. Joseph Rudolf	Lunenburg	17	199 00

QUEEN'S COUNTY.

83134	Infant	Lunenburg.	15	James H. Rhynard....	Brooklyn.....	5	50 00
103174	Iona.....	Liverpool	15	Robert Smith.....	Hunt's Point....	5	50 00
103191	Jennie B.....	"	13	William Vogler.	Port Joli	4	41 00
83310	Myosotis.....	Port Medway ..	80	Edwin Morine.....	Port Medway...	19	213 00
94833	News Boy.....	Liverpool	16	Alexander Shankle...	Port Mouton....	4	44 00
61916	Only Son.....	"	16	William A. Conrad ...	Liverpool.. . . .	4	44 00
103191	Oressa	"	10	Joseph Hagan	Hunt's Point....	4	38 00
107274	Priscilla.....	"	80	Abram W. Hendry....	Liverpool.....	15	185 00
103199	Trilby.....	"	12	William Wigglesworth	"	3	33 00

*No Crew Entitled.

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

RICHMOND COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
36474	Alexander Fraser..	Lunenburg	32	Anselm Sampson.....	River Bourgeois.	13	102 00
88456	Alice May.....	Arichat.....	39	Wm. J. Le Vesconte..	"	10	109 00
77544	Alpha.....	"	42	Wm. J. Le Vesconte..	"	12	126 00
103463	Annie May.....	"	11	Placide Dugas	"	6	53 00
41771	Atalia.....	Guysboro.	34	Jesse Hunson.	St. Peters.....	4	62 00
94680	Bonnie Glen	Halifax.....	17	Xavier Marchand.....	Petit de Grat....	6	59 00
75561	Boreas	Lunenburg	41	John Colford.....	Port Richmond..	8	97 00
54156	British Lady	Halifax.	19	Albert Joyce.....	River Inhabit'nts	5	54 00
38501	B. Wier & Co.....	Arichat.....	25	John Shannon	E. B. Riv. Inhab.	2	39 00
74100	Candid.....	"	23	Desiré Burke.....	River Bourgeois.	7	72 00
72061	C. P. M.	"	22	Alexander Burke.....	"	6	64 00
72058	Daisy.....	"	34	Patrick Richard	Arichat.....	4	62 00
88462	Fanny S.	"	28	Docité Fougere	River Bourgeois.	9	91 00
38481	G. H. B.....	"	36	Jeffrey Forgeron ..	West Arichat....	4	64 00
85382	G. H. Marryatt ...	Halifax.....	23	Isaac Dugas	"	3	44 00
88599	Guide.....	"	38	Edward Poirier.	Goulet.....	12	122 00
38468	Hector.....	Arichat.....	35	Edw. J. Walker	Basin.....	4	63 00
46294	Janett	Halifax.....	32	J. B. Girroir.....	West Arichat....	5	67 00
96764	Ida C. Spoffard...	Port Hawkesb'y	54	Robert Murray	Port Richmond..	6	96 00
85560	Jacques.....	Yarmouth	58	Frederick Poirier.....	D'Escousse	16	170 00
83135	J. B. M.....	Halifax.....	20	John Landry	Petit de Grat....	5	55 00
88454	Jubilee.....	Arichat.....	34	Arthur Poirier.....	Lowr D'Escousse	9	97 00
103458	K. McKenzie.....	"	17	James Barron.....	L'Ardoise.....	6	59 00
38516	Lady of the Lake..	"	26	Peter Landry.	St. Peter's Inlet.	8	82 00
88455	Laura Victoria....	"	39	Henry McDonald.	D'Escousse	12	123 00
61615	Laura Cox	Guysboro.	49	Alex'dr E. Morrison ..	"	15	154 00
96763	Lelia Linwood.....	Arichat.....	67	Wm. J. Le Vesconte..	River Bourgeois.	15	172 00
72071	Lumen Diei.	"	20	Urbain Sampson	"	7	69 00
88463	Maria.....	"	14	Andrew Boudrot.....	Petit de Grat. ...	3	35 00
38522	Mary.....	"	23	Isaiah Boudrot.....	River Bourgeois.	7	72 00
85388	Mary Alice.. ...	Halifax	21	Edward Malcom.....	Port Malcom....	5	56 00
100380	Mary D.....	Sydney	27	Simon Deveaux.	Little Bras d'Or	8	83 00
103462	Maud.....	Arichat.....	16	Henry Duyon.	Arichat.....	3	37 00
38417	Messenger.....	"	30	Cyprian Burke.....	River Bourgeois.	9	93 00
72048	Neptune	"	26	Henry Sampson.	"	7	75 00
74365	Nova Stella	"	53	Leon N. Poirier	D'Escousse	15	158 00
54139	Ocean Belle.....	Halifax.....	20	Isidore Fougere.....	Poulamond.....	8	76 00
61630	Olive J.....	"	57	John J. Malcom	Port Malcom ...	10	127 00
72067	Philomene D	Arichat.....	22	John Pelham.	Janvrin Island..	4	50 00
100477	Pilot.....	Lunenburg.....	42	William Proctor	R'vr Inhabitants	9	105 00
46485	Quickstep.....	Port Hawksb'ry.	52	John Murray	Port Richmond..	6	94 00
64033	Ripple	"	34	G. A. Cruickshank....	"	3	55 00
73119	Royal.....	Halifax	12	Nicholas McDonald...	Basin R. I.....	1	19 00
103461	St. Lidwina.....	Arichat	11	Alexander Peters.	L'Ardoise.....	4	39 00
103464	St. Patrick.....	"	27	Thomas Clannon	"	7	76 00
92599	Thistle.....	Sydney..	11	R. Monbourquette	" west.	4	39 00
103460	Two Brothers.....	Arichat	18	Maurice Peters.....	"	6	60 00
71034	Vanguard..	"	51	Dominick Boudrot	Petit de Grat. ...	7	100 00
38523	Victoria	"	24	Henry Burke.....	St. Peters... ..	7	73 00
57662	Village Bride.....	Halifax	24	Peter Malcolm... ..	Port Malcom. ...	6	66 00

SHELBURNE COUNTY.

94632	A. C. Greenwood..	Shelburne.....	15	Howard Chetwynd....	Port Saxon.....	6	57 00
97034	A. D'E.....	Yarmouth	15	David H. Blades.....	Upper W. Harb'r	3	36 00
103793	Agatha.....	Shelburne.....	80	John H. Thorbourne...	Jordan Bay.....	22	234 00
103792	Alice M. Gordon...	"	80	Enos Churchill	Lockeport.....	23	241 00
100620	Alina.....	"	80	Churchill Locke	"	20	220 00
100617	Altona.....	"	28	Austin Swanburg.....	Little Harbour..	8	84 00
80627	Annie D.....	Yarmouth	70	John M. Harding.....	Osborne... ..	8	126 00

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

SHELBURNE COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty Paid.
90655	Annina.....	Yarmouth.....	12	George Pike.....	Coffin's Croft. . .	4	40 00
107053	Bonnie Lin.....	Barrington.....	10	Norman Madden.....	Baccaro.....	6	52 00
103186	Brittania.....	Shelburne.....	11	Ross Enslow.....	Green Harbour..	5	46 00
96970	Charlie Richardson.	".....	26	John B. Harding..	Rockland.....	8	82 00
100605	Dawn.....	Barrington.....	49	A. N. Smith.....	Barrington.....	14	147 00
103118	Della F. Tarr.....	St. Andrews.....	34	Samuel Greenwood...	Port Saxon.....	9	97 00
96976	Edith.....	Shelburne.....	40	Enos Churchill.....	Lockeport.....	9	103 00
103789	Effie B. Nickerson.	".....	22	Amasa Nickerson....	Woods Harbour.	5	57 00
77603	Eldon C.....	Barrington.....	27	Josiah Thomas.....	Cape Negro.....	9	90 00
103795	Etta Vaughn.....	Shelburne.....	80	B. P. Thorbourn.....	Sandy Point....	21	227 00
85731	Eva L. H.....	".....	62	B. P. Thorbourn.....	".....	12	146 00
103319	Flora Temple.....	Port Hawksb'ry.	55	Joseph W. Nickerson..	Port La Tour...	9	118 00
90645	Fly.....	Yarmouth.....	16	William Wickens....	Shag Harbour..	3	37 00
100818	Geneva Ethel.....	Barrington.....	29	Charles E. Kenney....	Clark's Harbour	9	92 00
90647	Hattie Emeline....	Yarmouth.....	11	Charles A. Reynolds..	UpperPt LaTour	4	39 00
103790	Helene.....	Shelburne.....	80	Churchill Locke.....	Lockeport.....	20	220 00
94941	John Purney.....	".....	80	George H. King.....	Sandy Point....	21	227 00
85566	J. Lyons.....	Barrington.....	17	Joseph M. Thomas....	Cape Negro.....	7	66 00
73967	Katie.....	Liverpool.....	14	Churchill Locke.....	Lockeport.....	4	42 00
90438	Lark.....	Barrington.....	13	James Ross.....	UpperPt LaTour	5	48 00
94661	L. C. Tough.....	Shelburne.....	12	Thomas Swain.....	Black Point.....	5	47 00
80624	Lima.....	Yarmouth.....	12	William Halliday.....	Bear Point.....	3	33 00
51972	Lydia Rider.....	Shelburne.....	57	E. P. Greenwood.....	North East Ha'br	14	155 00
103796	Mabel Denvers....	".....	14	Alexander Smith.....	Cape Negro.....	5	49 00
103712	Marguerite.....	Yarmouth.....	10	Jared Brannen.....	L'wr Woods H'br	4	38 00
83493	Mary C.....	Liverpool.....	80	William McMillan....	Lockeport.....	20	220 00
92568	Mary Kate.....	Shelburne.....	13	Charles G. Acker.....	Churchover.....	3	34 00
103177	Mayflower.....	".....	12	Adam Hamilton.....	Carleton Village.	4	40 00
83434	Mary May.....	".....	20	Adam J. Firth.....	Shelburne.....	8	76 00
103782	Oasis.....	".....	80	John A. McGowan....	".....	20	220 00
103788	Plover.....	".....	80	George A. Cox.....	".....	21	227 00
100820	Ranger.....	Barrington.....	10	Robert Atkinson.....	North East Point	3	31 00
53551	Roving Bird.....	Halifax.....	24	King Perry.....	" Ha'br.....	9	87 00
103783	Springwood.....	Shelburne.....	80	William McMillan....	Lockeport.....	22	234 00
88542	Three Bells.....	".....	80	Enos Churchill.....	".....	21	227 00
96961	Tivoli.....	".....	24	W. J. Doane.....	Read Head.....	6	66 00
103179	Trilby.....	".....	31	William McMillan....	Lockeport.....	9	94 00
100608	Vesper.....	Shelburne.....	14	Churchill Locke.....	Lockeport.....	4	42 00
77744	Whip-poor-Will....	".....	17	J. P. Littlewood.....	Ingomar.....	5	52 00
90430	Will Carleton....	Barrington.....	80	James Snow.....	U. Port LaTour.	18	206 00
103183	Wren.....	Shelburne.....	18	William McCarthy....	Shelburne.....	3	39 00
100812	Wyvern.....	Barrington.....	25	Levi J. Nickerson....	Clark's Harbour.	7	74 00

VICTORIA COUNTY.

100388	Hattie.....	Sydney.....	27	John Fitzgerald.....	Dingwall.	4	55 00
74039	James Henry..	".....	18	John Dunphy.....	South Ingonish.	6	60 00
107351	Wilfrid Laurier....	".....	10	Daniel McLeod.....	".....	5	45 00

YARMOUTH COUNTY.

80647	Annie M. Bell.....	Yarmouth.....	64	Leandre Amiro.	East Pubnico... .	16	176 00
94980	Aurore.....	".....	80	Leon D'Eon.....	West Pubnico ..	19	213 00
88267	Bessie May.....	St. John.....	23	Nathaniel Pierce	Charlesville	6	65 00
103051	Carrie May.....	Yarmouth.....	25	Ferdinand Murphy....	Pubnico Harb'r.	9	88 00
85536	Circassian.....	".....	80	A. F. Stoneman.....	Yarmouth.....	20	220 00
94977	Civilian.....	".....	80	Henry S. LeBlanc	West Pubnico..	21	227 00

LIST of Vessels which received Fishing Bounty, &c.—Nova Scotia—*Con.*

YARMOUTH COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
103063	Defender.....	Yarmouth.....	20	A. F. D'Entremont...	West Pubnico...	8	76 00
103066	Eddie J.....	".....	23	C. L. D'Entremont....	".....	9	86 00
85683	Edith L.....	".....	16	W. A. Killam.....	Yarmouth.....	5	51 00
107332	Estelle.....	".....	15	Stillman Smith.....	Lower Argyle...	6	57 00
85551	Ethel.....	".....	80	J. H. Porter & Co....	Tusket Wedge...	18	206 00
97036	Eva.....	".....	10	Abijah Rankin.....	Lower Argyle...	3	31 00
100535	Fair Play.....	".....	11	J. B. Lewis.....	Yarmouth.....	3	32 00
90654	Flora.....	".....	64	Arthur D'Entremont..	West Pubnico..	20	204 00
94972	Florence.....	".....	11	Marc Boudreau.....	Tusket Wedge...	5	46 00
103719	Freddie M.....	".....	10	Dominique Muise.....	Comeau's Hill..	5	45 00
90885	Georgiana.....	".....	80	Henry Lewis....	Yarmouth.....	22	234 00
100327	Hattie.....	".....	10	Robert Ellenwood....	".....	2	24 00
80643	Hazel Dell.....	".....	80	James Amiro.....	West Pubnico...	20	220 00
85554	Hazel Glen.....	".....	80	H. T. D'Entremont...	Lower E. "...	19	213 00
103717	Henry L.....	".....	10	A. C. D'Entremont...	West "...	2	24 00
88587	Jessie May.....	".....	14	Alexander Hemlow...	Yarmouth.....	3	35 00
103709	Lizzie E.....	".....	14	E. Juston Ellis.....	Port Maitland..	5	49 00
80614	Louise.....	".....	80	J. H. Porter & Co....	Tusket Wedge...	18	206 00
103718	Lucy.....	".....	10	A. F. D'Entremont...	West Pubnico..	2	24 00
88596	M. A. Louis.....	".....	64	A. F. Stoneman.....	Yarmouth.....	18	190 00
103705	Nebula.....	".....	24	Ferdinand Amiro.....	West Pubnico...	10	94 00
90659	N. A. Laura.....	".....	59	Julien D'Entremont...	".....	18	185 00
90892	Nellie.....	".....	59	J. H. Porter & Co....	Tusket Wedge...	15	164 00
96777	Oriole.....	".....	43	J. L. Morton.....	Lower Argyle...	9	106 00
90873	Primrose.....	".....	34	H. T. D'Entremont...	Lower E. P'bnico	8	90 00
103706	Regine.....	".....	16	Wm. D'Entremont..	West "...	1	17 00
83254	Sea Foam.....	Annapolis.....	28	Joseph L. Amiro.....	Lower E. "...	7	77 00
75724	Sea Foam.....	Yarmouth.....	75	J. H. Porter & Co....	Tusket Wedge...	20	215 00
100323	Senora.....	".....	80	Marc A. Surette.....	West Pubnico...	22	234 00
88589	Sanford.....	".....	20	W. A. Killam.....	Yarmouth.....	*	20 00
100313	Souvenir.....	".....	71	Sylvain D'Entremont..	West Pubnico...	18	197 00
88597	Uncle Sam.....	".....	80	G. D. D'Entremont...	East "...	20	220 00
10330	Viola Pearl..	".....	23	Harvey Goodwin.....	Pubnico Harbo'r	8	79 00
90896	Wapite.....	".....	80	A. F. Stoneman.....	Yarmouth.....	18	206 00
103704	Whisper.....	".....	31	Henry A. Amiro.....	West Pubnico...	9	94 00
85559	Willie F.....	".....	12	Riley Haskell.....	Port Maitland..	5	47 00
90882	Will O' the Wisp..	".....	51	A. F. Stoneman.....	Yarmouth....	17	170 00
90897	Wrasse.....	".....	56	".....	".....	18	182 00

* No crew entitled.

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty for the year 1899.

PROVINCE OF NEW BRUNSWICK.

CHARLOTTE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
103124	Addie B.	St. Andrews....	13	Arthur Ramsdell.....	White Head Isl.	1	20 00
83478	Argyle.....	"	10	Joseph McGee.....	Back Bay.....	3	31 00
107439	Arminta.....	"	15	J. L. Guptill.....	Grand Harbour.	3	36 00
94727	Aurelia.....	St. John.....	22	James Scovil.....	Flagg's Cove ..	5	57 00
64011	Bee.....	St. Andrews....	18	Sherman Lawson.....	"	4	46 00
88409	Carrie.....	Digby.....	12	Thomas A. Cook.....	Le Tete	3	33 00
92515	Dispute.....	St. Andrews....	13	Byron Wilcox.....	Outer Wood Isld	2	27 00
92505	Edith R.....	"	47	Winslow Richardson..	Leonardsville....	4	75 00
103114	Edward Morse....	"	32	Alexander Calder, jr..	Wilson's Beach..	7	81 00
59391	Eliza Ann.....	"	12	John Wills.....	Whitehead.. ...	4	40 00
92516	Emma.....	"	22	Walter Galder, jr....	Campo Bello....	4	50 00
59382	Emma T. Story....	"	40	Henry E. Fraser	Grand Manan...	5	75 00
83202	Enchantress.....	"	10	Peter Dixon	Flagg's Cove....	3	31 00
80803	Exenia.....	Windsor.....	18	William F. Parker....	Beaver Harbour.	5	53 00
88276	Falcon.....	St. Andrews....	12	John F. Cronk.....	Flagg's Cove....	5	47 00
92511	Fleet Wing.....	"	11	Aldin McFarland....	"	3	32 00
97150	Gleaner.....	"	13	Frank Newman.....	Campo Bello....	2	27 00
107433	Golden Rule.....	"	49	Mariner Calder.....	Wilson's Beach	14	147 00
107432	Greenback.....	"	22	Irvine Ingalls.....	Grand Harbour.	4	50 00
59396	Gurtie Westbrook.	"	16	James Cline.....	Lord's Cove	*	16 00
94839	Harrie.....	"	14	William J. Tucker...	Le Tete	2	28 00
107437	Hattie L.....	"	12	Albert Cheney.....	Grand Harbour.	3	33 00
83463	Havelock.....	"	33	William James.....	Campo Bello....	6	75 09
103119	Hortense.....	"	15	William J. Morse.....	White Head Isl.	4	43 00
103121	Island Girl.....	"	17	Frank Ingersoll.....	Flagg's Cove....	2	31 00
103997	Jesse James.....	"	11	Lewis Franklyn.....	White Head Isl.	3	32 00
51965	John E. Dennis....	"	18	Alfred Stanley.....	Flagg's Cove....	3	39 00
77766	Laconic.....	"	15	John Dixon.....	"	3	36 00
88273	Lillian E.....	"	13	Sanford Dakin.....	Beaver Harbour.	1	20 00
59342	Lizzie S. McGee...	"	14	Andrew McGee.....	Back Bay.....	5	49 00
92514	Maggie Jane	"	10	John Thomas.....	Flagg's Cove....	3	31 00
83471	May Queen	"	31	Thomas Redmond.....	"	6	73 00
107434	Minnie G.....	"	13	Owen Green.....	Grand Harbour.	3	34 00
92518	Peril.....	"	18	Martin Eldridge.....	Beaver Harbour.	4	46 00
83132	Restless.....	Digby.....	25	Robert Graham.....	Sandy Cove, N.S	5	60 00
75591	Rise and Go.....	St. Andrews....	16	William Sirls.....	Wilson's Beach.	7	65 00
75864	Roving Lizzie....	Weymouth.....	11	John Carter.....	Seeley's Cove...	3	32 00
107433	Sir John.....	St. Andrews....	11	Hiram Morse.....	White Head Isl.	3	32 00
107440	Three Links.....	"	12	R. A. Main.....	Woodw'd's Cove	5	47 00
88414	Trumpet.....	St. John.....	20	Newton Wright.....	Beaver Harbour.	5	55 00
88282	Veritas.....	St. Andrews....	10	Simon Leonard.....	Leonardville....	1	17 00
103125	Virgin Queen.....	"	16	Nelson Morse.....	White Head Isl.	4	44 00
77969	Wave Queen.....	"	11	Hiram W. Foster.....	Grand Harbour.	4	39 00

GLOUCESTER COUNTY.

72099	Adelina.....	Chatham.....	12	Clement Lanteigne....	Lameque.....	4	40 00
103009	Adeline Gladys...	"	12	Richard Young.....	Shippegan.....	3	33 00
103081	Albatross.....	"	13	Thomas Ahier	"	3	34 00
100984	Alice.....	"	11	Joseph J. Doiron	Caraquet.....	4	39 00
103279	Alice Maud	"	10	C. Robin, Collas & Co.	"	3	31 00
97194	Alika.....	"	12	Lange Paulin.....	Lameque.....	4	40 00
103763	Alouette	"	10	Thomas Ahier.....	Shippegan.....	3	31 00
92419	Anna.....	"	12	Dosithé Chiasson.....	Lameque.. . . .	4	40 00

* No crew entitled.

LIST of Vessels which have received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
103073	Anna	Chatham	11	The W. S. Loggie Co..	Chatham	2	25 00
100960	Annie M.	"	11	"	"	4	39 00
103071	Anglesea	"	12	Hy. LeBouthillier....	Caraquet	4	40 00
100987	Arabi	"	12	Philip Rive	"	3	33 00
96739	Argeline	"	14	Joseph C. Doiron....	"	5	49 00
103085	Argentina	"	12	C. Robin, Collas & Co.	"	4	40 00
100983	Bee	"	11	"	"	4	39 00
61431	Bee	"	11	Paul Noel	Lameque	4	39 00
72079	Betsy..	"	13	Wm. Fruing & Co....	Shippegan	4	41 00
103072	Ben Hur	"	11	Richard Young.	"	4	39 00
100975	Big Bear	"	10	Robt. Young	Caraquet	3	31 00
100299	Blanchard	"	12	C. Robin, Collas & Co.	"	3	33 00
103589	Blenheim	"	13	"	"	4	41 00
103780	Britannia	"	13	Wm. Fruing & Co....	"	3	34 00
100780	Britannic	"	12	C. Hubbard	"	4	40 00
100909	Bluenose	"	11	Joseph Sewell	"	2	25 00
100988	Cæsar	"	10	Philip Rive	"	3	31 00
100774	Calliope	"	12	"	"	3	33 00
103271	Celia	"	11	Dominique Gallien....	"	4	39 00
103585	Cerdric	"	14	Philip Rive	"	4	42 00
100789	Chazalie	"	11	Robt. Young	"	3	32 00
100784	Charlotte	"	13	"	"	3	34 00
96730	Christina	"	11	C. Robin, Collas & Co.	"	3	32 00
101000	Condor	"	10	Thomas Ahier	Shippegan	4	38 00
103083	Corsair	"	10	"	"	4	38 00
100916	Cygnnet	"	12	C. Robin, Collas & Co.	Caraquet	3	33 00
100971	Cyprian	"	10	Elie Sivret	"	4	38 00
100913	Daffodil	"	10	Thomas Ahier	Shippegan	4	38 00
100915	Dawn	"	12	C. Robin, Collas & Co.	Caraquet	4	40 00
103934	Diamond Jubilee..	New Carlisle....	31	Daniel Hatton	Montreal.. ..	4	59 00
103076	Dipper	Chatham	12	The W. S. Loggie Co..	Chatham	4	40 00
92412	Dollie Dutton....	"	13	Richard Young	Shippegan	4	41 00
103949	Dora	"	12	Peter Fiott	Caraquet	3	33 00
100999	Dove	"	11	Thomas Ahier	Shippegan	4	39 00
100998	Eagle	"	10	"	"	4	38 00
100293	Eliza	"	15	Robt. Young	Caraquet	4	43 00
103590	Eliza	"	13	C. Robin, Collas & Co.	"	4	41 00
96737	Elmina	"	11	Jacques Noël	Lameque	4	39 00
96723	Emma	"	15	Sebastien Noël	Little Lameque.	4	43 00
100911	Emperor	"	10	Thomas Ahier	Shippegan	3	31 00
100786	Empress	"	12	Robt. Young	Caraquet	4	40 00
100772	Estelle	"	13	Philip Rive	"	3	34 00
103776	Esk	"	14	Robt. Young	"	4	42 00
100787	Ethel	"	11	"	"	3	32 00
100905	Evangeline	"	10	Philip Rive	"	4	38 00
103001	Falcon	"	10	Thomas Ahier	Shippegan	3	31 00
103077	Fame	"	10	The W. S. Loggie Co..	Chatham	4	38 00
100298	Fisher	"	12	Joseph J. Chiasson....	Little Lameque.	4	40 00
61445	Flavie	"	13	Théophile Duguay	Lameque	4	41 00
96736	Fly	"	14	Richard Young	Shippegan	3	35 00
61405	Fly	"	11	Alex. McLaughlin....	Tracadie	4	39 00
100782	Flying Foam	"	12	Robt. Young	Caraquet	4	40 00
100912	Foam	"	10	Thomas Ahier	Shippegan	3	31 00
85699	Four Sisters	"	10	Marcel Caron	Caraquet	4	38 00
100778	Gambetta	"	13	C. Hubbard	"	3	34 00
100954	Gazelle	"	10	"	"	3	31 00
100919	Gazelle	"	12	C. Robin Collas & Co.	Caraquet	4	40 00
100993	Garfield	"	10	Philip Rive	"	3	31 00
100968	Gem	"	11	C. Robin Collas & Co.	"	3	32 00
96733	Gem	"	12	Richard Young	Shippegan	3	33 00
103282	Gilknockie	"	11	Robert Young	Caraquet	3	32 00
103086	Gipsy	"	20	The W. S. Loggie Co..	Chatham	5	55 00
100964	Gladstone	"	10	Philip Rive	Caraquet	3	31 00

SESSIONAL PAPER No. 22

LIST of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*GLOUCESTER COUNTY—*Continued.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner. or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$
100910	Gleaner.....	Chatham.....	13	Luke Lanteigne.....	Caraquet.....	3	34 00
103766	Gluesta.....	".....	12	Thomas Ahier.....	Shippegan.....	3	33 00
100992	Great Mogul.....	".....	11	Philip Rive.....	Caraquet.....	3	32 00
92418	Grip.....	".....	12	James Davidson.....	Tracadie.....	3	33 00
100790	Guiding Star.....	".....	11	Robert Young.....	Caraquet.....	3	32 00
100956	Harold N.....	".....	12	The W. S. Loggie Co..	Chatham.....	3	33 00
107771	Heron.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 00
100994	Hercules.....	".....	10	Philip Rive.....	Caraquet.....	4	38 00
103950	Hibernia.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 00
103765	Hirondelle.....	".....	11	Thomas Ahier.....	Shippegan.....	3	32 00
100903	Hope.....	".....	12	Robert Young.....	Caraquet.....	3	33 00
61425	Hope.....	New Carlisle.....	13	C. Robin Collas & Co..	".....	4	41 00
103939	Hope.....	Chatham.....	11	Michael Bisho.....	Inkerman.....	3	32 00
100906	Hotspur.....	".....	10	Philip Rive.....	Caraquet.....	3	31 00
103931	Irene.....	".....	12	Wm. Fruing & Co.....	Shippegan.....	3	33 00
103779	Ibis.....	".....	11	".....	".....	4	39 00
96724	Isabel.....	".....	11	".....	".....	4	39 00
100997	Ivanhoe.....	".....	10	Thomas Ahier.....	".....	3	31 00
103281	Japan.....	".....	11	Robert Young.....	Caraquet.....	3	32 00
103289	Jersey Lily.....	".....	12	Thomas Ahier.....	Shippegan.....	4	40 00
100958	John B.....	".....	11	The W. S. Loggie Co..	Chatham.....	3	32 00
100965	Josephine.....	".....	11	Philip Rive.....	Caraquet.....	4	39 00
103949	King Fisher.....	".....	13	".....	".....	4	41 00
100981	Kite.....	".....	11	C. Robin Collas & Co..	Caraquet.....	4	39 00
103288	Kite.....	".....	10	Thomas Ahier.....	Shippegan.....	4	38 00
103283	Koh-i-noor.....	".....	13	Philip Rive.....	Caraquet.....	5	48 00
103003	Lark.....	".....	10	Thomas Ahier.....	Shippegan.....	3	31 00
103089	Lady Maud.....	".....	11	Philip Rive.....	Caraquet.....	3	32 00
100951	Leo.....	".....	13	Hyacinthe Lanteigne..	".....	4	41 00
103280	Lily.....	".....	11	C. Robin Collas & Co..	".....	3	32 00
100972	Lizzie D.....	".....	11	Robert Young.....	".....	3	32 00
88664	Lizzie D.....	".....	17	James Davidson.....	Tracadie.....	2	31 00
100980	Lynx.....	".....	11	C. Robin Collas & Co..	Caraquet.....	3	32 00
100955	Majestic.....	".....	10	C. Hubbard.....	".....	4	38 00
92403	Marie.....	".....	25	Ubalde Landry.....	Grand Anse.....	4	53 00
72100	Marie.....	".....	11	Onesime Chiasson.....	Lameque.....	4	39 00
103278	Marie Celia.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 00
100292	Marie Joseph.....	".....	12	Lazare Gauvin.....	Little Lameque..	4	40 00
100295	Marie Louise.....	".....	18	Joseph A. Paulin.....	Caraquet.....	4	46 00
100781	Mary Louise.....	".....	11	C. Hubbard.....	".....	2	25 00
103084	Mary Emma.....	".....	11	Onesime Paulin.....	".....	4	39 00
100957	Mary R.....	".....	12	The W. S. Loggie Co..	Chatham.....	3	33 00
103088	Max.....	".....	10	Maxime Cormier.....	Caraquet.....	5	45 00
103768	Mayflower.....	".....	13	C. Robin Collas & Co..	".....	3	34 00
61447	Merida.....	".....	13	Andre D. Aché.....	Lameque.....	4	41 00
100779	Mermaid.....	".....	11	C. Hubbard.....	Caraquet.....	3	32 00
100785	Midnight.....	".....	12	Robert Young.....	".....	3	33 00
100300	Mikado.....	".....	13	C. Robin Collas & Co..	".....	3	34 00
88669	Morning Star.....	".....	12	Gustave Gionet.....	Pokemouche.....	3	33 00
100970	Nellie.....	".....	11	Dominique Gallien.....	Caraquet.....	4	39 00
103284	Normandy.....	".....	11	Philip Rive.....	".....	2	25 00
103004	Oriole.....	".....	11	Thomas Ahier.....	Shippegan.....	4	39 00
103005	Osprey.....	".....	10	".....	".....	4	38 00
100297	Palma.....	".....	14	Oliver Duguay.....	Lameque.....	5	49 00
100776	Patrick.....	".....	11	Philip Rive.....	Caraquet.....	4	39 00
103778	Pelican.....	".....	13	Wm. Fruing & Co.....	Shippegan.....	4	41 00
103777	Penquin.....	".....	13	".....	".....	4	41 00
103674	Petrel.....	".....	12	Thomas Ahier.....	".....	4	40 00
96732	Providence.....	".....	11	Jos. L. Robichaud.....	".....	4	39 00
72076	Providence.....	".....	12	Thomas Ahier.....	".....	4	40 00
96740	Providence.....	".....	13	Prosper Albert.....	Caraquet.....	3	34 00
103080	Ptarmigan.....	".....	11	Thomas Ahier.....	Shippegan.....	4	39 00
100904	P. T. S.....	".....	11	J. N. LeBouthillier...	Caraquet.....	5	46 00

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

GLOUCESTER COUNTY—*Concluded.*

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew paid.	Amount of Bounty paid.
							\$ cts.
103287	Raven.....	Chatham.....	11	Thomas Ahier.....	Shippegan.....	3	32 00
100775	Red Gauntlet.....	".....	11	Philip Rive.....	Caraquet.....	3	32 00
103272	Red Weasel.....	".....	11	Richard Young.....	Shippegan.....	4	39 00
100952	Replevin.....	".....	10	Robin, Collas & Co....	Caraquet.....	4	38 00
103586	Remus.....	".....	17	The W. S. Loggie Co..	Chatham.....	4	45 00
103078	Reward.....	".....	13	James De Grace.....	Shippegan.....	4	41 00
97191	Rita.....	".....	12	Robin, Collas & Co....	Caraquet.....	4	40 00
103946	Robin.....	".....	12	Peter Fiott.....	".....	3	33 00
103587	Romulus.....	".....	19	The W. S. Loggie Co..	Chatham.....	4	47 00
100908	Rosalie.....	".....	10	E. LeBouthillier.....	Caraquet.....	3	31 00
100773	Rupert.....	".....	12	Philip Rive.....	".....	4	40 00
103273	Russell.....	".....	10	John M. Ward.....	Miscou.....	4	38 00
96727	Ryse.....	".....	11	Luc Aché.....	Lameque.....	3	32 00
100907	Sarah.....	".....	10	Robt. Young.....	Caraquet.....	3	31 00
74401	Sara.....	".....	11	Nazaire Noel.....	Lameque.....	4	39 00
92408	Sarah A. W.....	".....	15	Robt. J. Wilson.....	Wilson Point....	4	43 00
103010	Sarah B.....	".....	10	Joseph N. Lanteigne..	Caraquet.....	3	31 00
103584	Saxon.....	".....	13	Philip Rive.....	".....	4	41 00
100959	Sea Bird.....	".....	10	The W. S. Loggie Co..	Chatham.....	3	31 00
100901	Sea Flower.....	".....	12	Robt. Young.....	Caraquet.....	4	40 00
100914	Sea Flower.....	".....	11	Robin, Collas & Co....	".....	4	39 00
96731	Sea Star.....	".....	13	Joseph M. Savoy.....	Shippegan.....	4	41 00
100961	Silver Moon.....	".....	14	The W. S. Loggie Co..	Chatham.....	5	49 00
100788	Sir Charles.....	".....	11	Robt. Young.....	Caraquet.....	4	39 00
100974	Sivret.....	".....	10	".....	".....	4	38 00
100982	Snowdrop.....	".....	11	Robin, Collas & Co....	".....	4	39 00
103008	St. Joseph.....	".....	12	Adolphe Aché.....	Lameque.....	4	40 00
100963	Stanley.....	".....	10	Philip Rive.....	Caraquet.....	3	31 00
103087	Stanley.....	".....	10	Joseph A. Baudin.....	Miscou.....	4	38 00
103767	Stella Maris.....	".....	19	Luc Friolet.....	Caraquet.....	4	47 00
103947	Swallow.....	".....	13	Peter Fiott.....	".....	3	34 00
103761	Swing.....	".....	11	Agapit A. Albert.....	".....	3	32 00
103772	Surprise.....	".....	10	Thomas Blanchard.....	Mizzonette.....	3	31 00
103762	Swan.....	".....	14	Thomas Ahier.....	Shippegan.....	4	42 00
100986	Swift.....	".....	11	F. G. Chiasson.....	Little Shippegan	3	32 00
100777	Teutonic.....	".....	11	C. Hubbard.....	Caraquet.....	3	32 00
100918	Tickler.....	".....	12	Robin, Collas & Co....	".....	3	33 00
96738	Three Brothers....	".....	12	Richard Young.....	Shippegan.....	4	40 00
103082	Thrush.....	".....	10	Thomas Ahier.....	".....	3	31 00
103583	Two Brothers.....	".....	11	The W. S. Loggie Co..	Chatham.....	4	39 00
103285	Valkyrie.....	".....	12	Philip Rive.....	Caraquet.....	3	33 00
103274	Vesuvius.....	".....	10	George Mallet.....	Shippegan.....	4	38 00
103775	Victoria.....	".....	16	The W. S. Loggie Co..	Chatham.....	4	44 00
100995	Voltaire.....	".....	10	Philip Rive.....	Caraquet.....	3	31 00
100966	Von Moltke.....	".....	11	".....	".....	3	32 00
103588	Vulture.....	".....	13	The W. S. Loggie Co..	Chatham.....	5	48 00
96735	White Fish.....	".....	12	Joseph L. Savoy.....	Lameque.....	4	40 00
100953	White Wings.....	".....	10	Robt. Young.....	Caraquet.....	4	38 00
100973	World's Fair.....	".....	11	".....	".....	4	39 00
103079	Wren.....	".....	11	Thomas Ahier.....	Shippegan.....	3	32 00
100920	Zephyr.....	".....	12	Robin, Collas & Co....	Caraquet.....	3	33 00

NORTHUMBERLAND COUNTY.

100969	John Bull.....	Chatham.....	10	James Anderson.....	Church Point...	4	38 00
92420	Mary Louise.....	".....	13	Donald Loggie.....	".....	4	41 00
83096	St. Patrick.....	".....	16	John White.....	Upper Neguac..	3	37 00

SESSIONAL PAPER No. 22

List of Vessels which received Fishing Bounty, &c.—New Brunswick—*Con.*

ST. JOHN COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
88253	E. B. Colwell.....	St. John....	19	Addison Thompson..	Dipper Harbour.	4	47 00
59373	E. M. Oliver.....	St. Andrews....	14	Charles Harkins	" ..	3	35 00
77783	Lost Heir.....	St. John.....	15	Henry Alston.....	Pisarinco	5	50 00
83426	Louisa	"	16	Bristall Hargrove.....	Dipper Harbour.	4	44 00
92509	Mary Jane.....	St. Andrews....	13	M. Shannon.....	Musquash	2	27 00
52159	Mary E.....	St. John	21	Fred'k Buchanan	St. John.....	3	42 00
80630	Vanity	Yarmouth.....	11	Patrick Murray.....	Dipper Harbour.	4	39 00

PROVINCE OF PRINCE EDWARD ISLAND.

KING COUNTY.

38335	Elizabeth	Arichat.....	17	James Gerrior	Georgetown.....	5	52 00
75552	Hannah Eldridge..	Charlottetown ..	57	Henry Dicks.....	"	5	32 00
75566	Julia A.....	" ..	15	Reuben Penny.....	Murray Harbour		
					South	4	43 00
94670	Kate A. Burns....	Halifax.....	36	Joseph White.....	Beach Point....	9	99 00
69105	Lady of the Lake..	"	20	Sampson Bowdridge..	"	4	48 00
69109	Marcella Butler....	"	38	John Hemphill	Georgetown.....	5	73 00
107189	Sea Pearl	Charlottetown ..	11	Augustin Boudreau ..	Lower Montague	4	39 00
90488	Wave	" ..	19	James Delory.....	Georgetown.....	3	40 00

PRINCE COUNTY.

71310	Black Watch.....	Charlottetown ..	23	Benjamin Perry.....	Alberton	3	44 00
103771	J. Anny	Chatham	12	John Poirier.....	Tignish	5	47 00
92473	Lucy Louise.....	Charlottetown ..	19	James Roach.....	Malpeque.....	6	61 00
94992	Sarah P. Ayer.....	" ..	64	John Champion.....	Alberton	8	120 00
96926	Sea Foam.....	" ..	15	John Kinch.....	"	4	43 00
88518	W. F. Elizabeth...	Sydney.....	10	Roderick McDougald..	Port Hill....	4	38 00

QUEEN COUNTY.

92466	G. H. Gardner	Charlottetown ..	17	E. Marshall, jr.....	North Rustico ..	7	66 00
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PROVINCE OF QUEBEC.

BONAVENTURE COUNTY.

Official Number.	Name of Vessel.	Port of Registry.	Tonnage.	Name of Owner or Managing Owner.	Residence.	No. of Crew Paid.	Amount of Bounty Paid.
							\$ cts.
83399	Finnie, R. C	Halifax.	21	William Joseph.	Paspebiac.	3	42 00

GASPÉ COUNTY.

103148	River Pride.	Gaspé.	52	Alexander & LeMarquand.	Point St. Peter..	8	108 00
107188	Stella.	Charlottetown ..	15	Adonias Bourque	Etang du Nord..	4	43 00
94675	Success.	Halifax.	16	R. J. Leslie	Amherst, M.I ..	4	44 00

SAGUENAY COUNTY.

74270	Amarilda	Quebec	24	Cléophas Vézina	St. Michel.	2	38 00
85756	Aristile	"	19	Philias Vezina.	"	2	33 00
100463	B. C.	"	15	François Metivier. . . .	St. Thomas. . . .	2	29 00
61966	D. Cronan.	Halifax.	40	Peter LeMarquand. . . .	EsquimauxPoint	6	82 00
107239	Marie Anne.	Quebec.	12	Isaïe T. Comeau.	Caribou Islands.	2	26 00
69382	Marie d'Sacre Cœur	Gaspé	46	Alexander Turbis	EsquimauxPoint	8	102 00
75445	Phoenix.	"	28	Napoleon Scherrer. . . .	"	5	63 00
103358	Romeo.	Quebec	22	Louis Pineau	Bic	2	36 00
75680	Sea Star.	"	52	Simon Cormier.	PointEsquimaux	7	101 00
80753	Stella Maris.	"	51	Louis Cummings	"	10	121 00
107231	St. Anne.	"	13	Magloire Chouinard. . .	Manicouagan. . .	4	41 00
92334	Ste. Marie	"	53	Pierre Ouelette	Quebec	6	95 00
66727	Willow.	"	18	Auguste Boulet	St. Thomas	3	39 00

SESSIONAL PAPER No. 22

APPENDIX No. 3.

NOVA SCOTIA.

District No. 1.—Comprising the four counties of the Island of Cape Breton.

Inspector A. C. Bertram, North Sydney, C. B.

District No. 2.—Comprising the counties of Cumberland, Colchester, Pictou, Antigonish, Guysborough, Halifax and Hants.

Inspector Robert Hockin, Pictou.

District No. 3.—Comprising the counties of King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's and Lunenburg.

Inspector L. S. Ford, Milton.

DISTRICT No. 1.

ANNUAL REPORT ON THE FISHERIES OF CAPE BRETON ISLAND, 1899.

NORTH SYDNEY, C.B., January 2, 1900.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith my sixteenth annual report on the fisheries of District No. 1, comprising the four counties of the Island of Cape Breton, together with statistical tables showing in detail the catch in each section and locality, with synopsis of reports of overseers for the past year.

The principal feature of last season's fishery operations, I am pleased to say, is an increase in the total yield amounting to \$239,191. This increase is made up by the returns from counties, viz :—Inverness, Cape Breton and Victoria ; Richmond County giving a decrease. The kinds of fish which go to make up the increase in Cape Breton County are pickled salmon, herring, lobsters, cod, haddock, hake, pollock and halibut. In Inverness there is an increase in the catch of cod, haddock, hake, halibut and squid, and in Victoria County there is an increased catch of salmon, herring, cod, haddock, hake, pollock and halibut ; while in Richmond County there is a marked decrease in salmon, herring and lobsters as compared with the previous year.

Taking the statistics for the whole island it will be observed that the principal decreases are to be found in the salmon and mackerel fishery while all other branches show a considerable increase over the season of 1898.

LOBSTERS.

There were seventy-four lobster canneries in operation during the past season against seventy-one in the previous year. The increase in the canned article amounted to 28,276 cans of one pound each. The counties of Cape Breton and Richmond have

entered vigorously into the export of live lobsters this year to the American market, with the result that during the past season there has been an increase of 22,306 cwt. This branch of the industry has brought to those engaged in it such remunerative returns that it is likely to be entered into more vigorously next season. The Bras d'Or lakes were the principal contributors to this export of live lobsters. In this inland sea lobsters are unusually large and almost each one taken exceeds in length the United States prescribed limit of ten and a half inches. In the Bras d'Or waters, lobsters are not found as plentiful as on the sea coast, but as already stated the percentage of size is much greater. Why the difference in this inland sea over the coastal waters can only be explained by the fact that the feeding ground is so much better in the lakes than outside. It is contended by some fishermen that there are abundance of lobsters in these extensive Bras d'Or lakes, but they are so large and so well fed that they will not trap as readily as lobsters in the sea shore waters which are all the time on the move in search of food. It is my opinion that with the increased export of live lobsters there will be a proportionate decrease in canning, as the high price realized for live lobsters will be found more remunerative than canning. Besides there is much less labour required in the export than in canning. Then again, in consequence of the growing demand for labour in our extensive mines and iron works, the price of labour has so advanced of late that unless the canned article also advances in price the labour problem will enter into the canning industry to such an extent that there will be a great decrease in the number of canneries now in operation. I do not think this will be regrettable, as it will help to preserve to future generations a branch of the fishery which has been threatened in recent years owing to a more vigorous prosecution.

COD.

There is an increased catch in this important branch of the fishery of 27,149 cwt. over the previous one, notwithstanding the fact that 1898 showed a marked increase over 1897. This increase is in the dried article, which excepting what is used for local consumption, is exported to foreign countries. Local dealers ship by coastal vessels to Halifax and Newfoundland, from which places, the product is exported to foreign markets. There are several large firms known as the Jersey firms, which carry on an extensive fishery business at Arichat, in Richmond County, and Cheticamp in Inverness. These firms export direct from Cape Breton to foreign countries, bringing back fall and spring salt and general goods, such as are required by those engaged in the fishing industry. There has been an advance in the price of dried cod this year, which accounts for the increased catch. In some localities these fish were found very scarce all the season, whereas in other districts they were more abundant, particularly in the autumn season. Fishermen attribute the scarcity of cod to the pollution of the inshore waters by bait used in lobster traps and the throwing of fish offal overboard by fishing vessels. Possibly the water is affected by decayed matter and the fish in consequence leave for other parts, but I am of the opinion that scarcity of cod and haddock in certain seasons is owing to the lack of food. Cod largely feed on caplin, squid and other small fish. It is noticed that when these small fish strike inshore they are invariably followed by cod and haddock. Therefore, this is the best proof that the cod family are continually on the move in search of food. If the inshore banks do not supply this food these fish are to be found elsewhere. Invariably when cod and haddock are scarce in Cape Breton waters they are reported plentiful on the Newfoundland coast and on the great banks in the Atlantic. They are a migratory fish and so prolific that the supply will always be kept up. Man is not as great an enemy to the cod family as the hair seal, which mainly exists on cod. It is no unusual occurrence to find in a seal as many as five or six cod, and as many as fourteen have been found in the stomach of one large seal. These hair seals can be seen the year around in our waters. Considering the quantity of human food fish they devour, the killing of hundreds of thousands of seals every year on our coast and on the coast of Newfoundland helps more than anything else to preserve the cod family. If those of our local fishermen who complain of scarcity of fish in our inshore waters would follow the example of the fisher-

SESSIONAL PAPER No. 22

men of Lunenburg and other western counties of Nova Scotia and build schooners so that they could reach the great cod banks in the ocean, there would be less cause for grumbling and complaint of hard times such as is frequently heard from those who engage in the fishing industry.

MACKEREL.

This branch of the fishery shows a decrease amounting to 3,073 barrels of pickled fish. There has been an increase, however, of 109,286 pounds of fresh mackerel, which has been purchased from fishermen by owners of freezers as well as those who canned mackerel. The frozen fish were exported to the United States during winter, and the canned article sold among local merchants as well as marketed in Halifax. The catch of mackerel depends a great deal upon the condition of the water. On their journey to southern waters from the North Bay and Magdalen Islands, if the autumn is fine these fish keep well inshore, where they can be reached by local fishermen's gill-nets, but if the weather is stormy, mackerel invariably keep out in deep water during their journey south, and are thus lost to the shore fishermen. The fall mackerel fishery is the most profitable of this branch to our local fishermen. I have in former reports pointed out the injury to this fishery by American seining vessels, which pursue the mackerel on their way to the spawning grounds and capture tens of thousands of barrels of parent fish just before spawning. As the American seiners are on the increase, the destruction will become greater. If the Honourable the Minister could bring about an agreement with the American authorities by which these purse-seining vessels would be refused clearance from their customs houses until after the 15th June in each year, he would be adding to the many benefits he has conferred on his country in connection with the great fishery industry. Unless something is done I fear that the mackerel branch of our fisheries will become a thing of the past.

SALMON.

There is a very marked decrease in the catch of salmon. In fresh salmon the statistics show a falling off of no less than 51,968 pounds, and in preserved of 10,261 pounds. Pickled salmon shows an increase of 685 barrels. Last year there was an increased catch of salmon over the previous year, but why there should be such a marked decrease this year is unexplainable, as even a greater number of gill-nets were employed in this fishery. There are two freezers which take salmon from the fishermen and freeze them for the Canadian and United States markets. There was a scarcity of salmon throughout the fishing season. The season for this fishery ends on the 15th August, but beginning with the middle of September and continuing until the middle of October salmon enter our coastal waters in immense numbers, and when the autumn rains begin they ascend the straems and run to the spawning grounds. There is hardly a stream, large or small, that these fish do not ascend, yet they make their appearance too late for commercial purposes. There is no doubt there are two runs of salmon. In the month of June, salmon make their first appearance on our coast. This is the commercial run. They enter only a few of our large rivers, and those which can escape the gill-net set in the sea coast and inside tidal waters, as well as the angler's fly, reach the upper waters. These fish spawn last of August and early in September, and return to the sea, but the autumn run referred to above remain in the deep pools and lakes all winter, and return to the sea as soon as the ice leaves the streams and lakes. Hence when a hatchery is necessary to keep up the supply the spawn should only be taken from the mid-summer run and in no case from the fall run. This has been done in years past with the result that the Cape Breton rivers in autumn are alive with salmon, which under our regulations, are of no commercial value, while in midsummer the drain on the fishery is greater than the supply. A hatchery is needed at Margaree, where the drain is great in the coastal waters. The Honourable the Minister has instructed me to cut down falls in the Little River, Cheticamp, at a cost of some \$350. A fall of some fourteen feet has been reduced to six feet, with the result that salmon in this

important river can reach nine miles of spawning grounds which they were prevented from reaching previously. I look for great results to the fishery on account of this wise expenditure, as I know from observation that tens of thousands of these commercial fish were prevented from reaching the upper waters before, while there were hardly any grounds on the reefs between this fall and the tidal waters for salmon to spawn. The blasting of this fall at such a trifling cost, in my opinion, will be of greater benefit to the salmon fishery of Cheticamp and Pleasant Bay than a hatchery.

HERRING.

There has been a decrease in pickled herring of 1,744 brls., and an increase of 300,250 lbs. of herring fresh. The former has reference to our large midsummer herring and the latter to the spring run, which is largely used for bait. Year by year our midsummer run of herring is declining much to the loss of our fishermen and farmers who live on the sea-coast. The large midsummer herring commanded a high price in the provincial markets and are extensively used for home consumption. The cause of the decrease is unexplainable.

OYSTERS.

The statistics show an increase in oysters of 38 brls. Our oyster grounds sadly need cleaning, as in the Malagawatch district the oyster beds are dying. I attribute this to the fact that eel grass is smothering the oysters. The grounds here need cleaning and restocking. The waters are well adapted in many parts of Cape Breton for the propagation of the oysters.

OTHER BRANCHES.

Smelts, also a commercial fish, show an increased catch of 37,037 lbs. Licenses are granted to fishermen who catch these fish in winter in the various bays in bag-nets and ship them frozen in boxes to New York and Boston markets. If the season is cold so that these fish can be frozen, the fishermen are well remunerated, but our seasons are invariably too mild for the successful prosecution of this fishery.

There is an increase in the catch of trout, but as these fish are caught by anglers and enter only into home consumption, it is impossible to obtain accurate statistics. The supply is well kept up.

There is a notable improvement in recent years in the observance of the various regulations. So many persons appearing before my fishery courts who were made examples of when convicted, that it has had a wholesome effect all round.

Appended hereto will be found a synopsis of the reports of fishery overseers in this district, all of which is respectfully submitted.

SYNOPSIS OF FISHERY OVERSEERS REPORTS FOR THE ISLAND OF CAPE BRETON.

Overseer A. R. Forbes, of North Sydney, reports a marked increase in all branches of the fishery in his district, with the exception of herring, the scarcity, of which he attributes to the presence of drift ice on the coast in the early part of the season. About 25 per cent of the total catch in his district is used for home consumption. The close seasons were well observed.

Overseer M. R. McInnis, of Amaguades Pond, reports an increase in the catch of cod. This increase he attributes to a more vigorous prosecution of the industry than formerly and to the abundance of these fish. Herring were scarce. The live lobster industry was also vigorously prosecuted in his district during the season. About fifty

SESSIONAL PAPER No. 22

per cent of the total catch was sold in Canadian markets and the remainder used for home consumption. No abuses exist in his district and the close seasons were well observed.

Overseer Murdo McLean, of Jacksonville, reports an increased catch of herring, which he attributes to the increased demand for these fish by the fishermen who use them for bait. He reports a decrease in all other branches of the fisheries in his district owing to a less vigorous prosecution than formerly, many of the young men having abandoned the fishing industry, preferring to work in the mining sections of the country. No illegal fishing has come under his notice. There are no mills in his district.

Overseer John McLean, of Gabarous Lake, in his report states that there is an increase in cod, herring, and lobsters. The live lobster industry was carried on on a much larger scale than previously. The increase in herring and cod he attributes to fine weather during the fishing season and bait being more abundant than last year. The several close seasons were well observed.

Overseer Henry La Vatte, of Louisbourg, reports that the fisheries in his district have been more remunerative during the season just closed than for some years past. The herring catch was small, but prices ranged higher than in 1898. Cod were plentiful, but bait was scarce and the presence of dogfish also interfered with this fishery. Lobsters and haddock were plentiful. The close seasons were well observed.

Overseer C. L. Reeves, of Port Morien, reports an increased catch of salmon, cod, pollock and halibut, and a decrease in herring and mackerel. The decreases were doubtless owing to scarcity of these fish.

INVERNESS COUNTY.

Overseer D. F. McLean, of Port Hood, reports a decrease in all branches of the fisheries in his district compared with the season of 1898, with the exception of haddock and smelts. This decrease is attributable largely to a less vigorous prosecution of the industry than during the preceding years. Many who had heretofore engaged in the fishery are now devoting their time to other work. A large percentage of the fish taken was sold fresh, which accounts for the increase in value as shown by the returns. About 75 per cent. of the total catch is exported to different countries and the remainder is used for home consumption. The close seasons have been well observed, the guardians employed having been most vigilant in protecting the fisheries of the districts assigned them. One trap-net under license from the Department of Fisheries was operated in his district.

Overseer Lewis McKen, of Mabou, reports a decrease in the catch of cod, haddock and hake. This decrease he attributes partly to scarcity of these fish. Bait was also scarce, and the majority of the fishermen in his district being engaged up to the middle of July in the lobster fishery, very little attention was paid to line fishing. Dogfish were also very troublesome. The spring herring catch was fair, but the July catch was a total failure. The small quantity taken were used for home consumption. He attributes the scarcity of herring to the presence of so many lobster traps on the fishing grounds. Mackerel and salmon were also scarce, while there was an increase in lobsters. No abuses exist in his district, and the regulations were fairly well observed, only one violation having come under his notice during the season. There are no fishways and in his opinion none are required.

Overseer A. A. Chisholm, of Margaree Forks, reports an average catch of salmon, an increase in herring and cod, and a decrease in mackerel. The prices realized for fish during the past season were good and the fishermen were satisfied with the result of their labours.

Overseer Wm. Aucoin, of Cheticamp, reports an increased catch of cod, hake and haddock, an average catch of herring and lobsters and a decrease in salmon, halibut and mackerel. The increase in cod, haddock and hake he attributes to the fact that bait was plentiful and the industry was more vigorously prosecuted than in the

64 VICTORIA, A. 1901

preceding year. About 60 per cent, of the fish taken in his district is sold in Canadian markets and the remainder used for home consumption. No abuses of any kind exist in his district.

Overseer Angus McIntosh, of Pleasant Bay, reports that the mackerel fishery, which is the leading branch of the industry in his district was a total failure. This failure he attributes to the abuse of the purse-seine. The salmon fishery was also a failure and he is unable to assign any cause for the same. The lobster and cod fisheries were good. Almost the total catch were exported, a very small percentage being used for home consumption. No violations of the regulations came to his notice.

RICHMOND COUNTY.

Overseer D. R. Boyle, of West Arichat, in his report states that the fisheries in his district on the whole have not been as successful as in the previous year. The total catch, with the exception of cod, pollock and smelts shows a decrease, and there was also a falling off in the number of men engaged in the industry. The increase in cod he attributes to the successful prosecution of this branch of the fishery in the North Bay by the Goulet and Descousse fleet of fishing vessels. He is of the opinion that this fishery would have shown a still greater increase were it not for the presence of dog fish on the coast. The prices for all kinds of fish ruled higher than in the preceding years, and this made up in a great measure for the loss to the fishermen on account of a decreased catch, &c. No abuses exist in his district, and the several close seasons were well observed. About 75 per cent of the total catch was exported and the remainder was used for home consumption.

Overseer Archd. Morrison, of Cannes, is pleased to report an increase in the several branches of the industry in his division; the only decrease being in the lobster fishery. This decrease is attributable, he thinks, to the fact that this particular branch of the fisheries is being overdone. Almost all the fish taken in his district was exported to Canadian markets; only a very small percentage being used for home consumption. The close seasons were well observed.

Overseer Arthur Brymer, of Lower L'Ardoise, also reports a satisfactory increase in all branches of the fisheries during the past season over that of 1898. The increase in the catch of the mackerel he attributes to the absence of purse-seines from the coast during the mackerel season. Herring and cod were found in abundance and bait was also plentiful. No abuses exist in his district, and the close seasons were strictly observed.

VICTORIA COUNTY.

Overseer Duncan Gillis, of Baddeck, reports a slight decrease in the fisheries of his district owing, with the exception of the salmon fishery, to a less vigorous prosecution of the industry than formerly. The decrease in salmon he attributes to the scarcity of these fish on the lake shore. The prices paid for fish in his district have been very fair. Only a small percentage of the total catch is exported, the most of it being used for home consumption. There are no fish-ways in his district and only one mill is operated, whose owner complies with the regulations. The close seasons were well observed.

Overseer Chas. McKrae, of Middle River, reports an increase in salmon and cod, while all other branches are about the same as the preceding year. He claims that the industry has been more vigorously prosecuted than formerly. The several close seasons were observed, as were also the saw-dust regulations. There are no fish-ways. About 65 per cent of the total catch was sold in Canadian markets, the balance being used for home consumption.

Overseer Alex. Morrison, of Wreck Cove, reports an increased catch in the several branches of the industry in his district, with the exception of mackerel and herring. The several close seasons were well observed.

SESSIONAL PAPER No. 22

Overseer D. P. Montgomery, of Neil's Harbour, reports a slight increase in the catch of cod, while all other branches are about the same as in the previous year. The regulations governing close seasons, &c., have been strictly observed.

Overseer W. R. Moffatt, of Cape North, in his report states that while there is an increased catch of cod, herring and haddock the returns will show a marked decrease in the mackerel fishery. This decrease is claimed by the fishermen in his district to be caused by the presence of dogfish on the coast. These fish were very plentiful and did much damage to fishing gear besides frightening mackerel away. Almost the total catch of fish in his district is exported, only a small amount being used for home consumption. No violations of the regulations have come under his notice.

I have the honour to be, sir,
Your obedient servant,

A. C. BERTRAM,
Inspector of Fisheries.

DISTRICT No. 2.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 2, NOVA SCOTIA,
COMPRISING THE COUNTIES OF ANTIGONISH, COLCHESTER, CUMBERLAND, GUYSBOROUGH, HALIFAX, HANTS AND PICTOU.

PICTOU, January 2, 1900.

Hon. Sir LOUIS H. DAVIES, K. C. M. G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report on the fisheries of District No. 2, Nova Scotia, together with tabulated returns showing the increase or decrease of each kind of fish.

The estimated value of the total catch for the past season is \$1,721,734, as compared with the estimated value of the catch for the year 1898, \$1,456,271, showing an increase in value of \$245,461, or nearly 17 per cent over the value of that year. This increase has been chiefly in the value of the catch of deep-sea fish, viz., cod, mackerel, and halibut.

Since the year 1890, when this district was set off, the value of the several year catch has been as follows :—

1890.....	\$1,453,015	1895.....	\$1,429,782
1891.....	1,640,912	1896.....	1,245,463
1892.....	1,357,208	1897.....	1,461,327
1893.....	1,427,605	1898.....	1,456,271
1894.....	1,510,900	1899.....	1,721,735

The results of last year's fishing being more favourable than any for the last ten years.

Of the anadromous fishes, the reports show that of—

Salmon there is an increase of	6 per cent.
Shad there is an increase of	13 “
Smelts there is an increase of	16 “
Alewives there is a decrease of	25 “

Of the deep-sea fish the catch of—

Halibut shows an increase of about.....	28 per cent.
Cod shows an increase of about.....	38 “
Haddock shows an increase of about	4 “
Pollock shows an increase of about	68 “

Comparing the aggregate catch of the whole cod family with that of last season there is an increase of about 50 per cent.

SALMON.

The returns for the district show an increase of nearly 30 per cent in the value of the catch of those fish, and this notwithstanding that on the Atlantic coast the catch was about 50 per cent less than last year, while on the coast fisheries of the Straits of Northumberland the decrease was about 20 per cent; the increase in the catch was entirely in the Bay of Fundy parts of the district, showing an increase of about 100 per cent. The results of this fishery are probably affected by the favourable or unfavourable condition of the rivers at spawning season, (Oct. and Nov.). In years that the streams are low, fish, if they do ascend the river, are easily observed, and the poacher does his deadly work. If these conditions obtain for a number of seasons in succession the results must be disastrous. Other years when the rivers are full, fish ascend readily and are not so easily detected, and under such conditions the spawn can be deposited in favourable locations and probably a larger number reach the fry stage.

Just why there should be such excellent returns from the Bay of Fundy and so great a falling-off in the Atlantic and Northumberland Straits fisheries is a question the writer cannot answer any more than an equally difficult one concerning the

SHAD FISHERY

which is almost entirely confined to the Bay of Fundy part of the district, and the returns show an increase of about 13 per cent over last year, while the catch of 1898 was 100 per cent over that of the previous year, the results of the several years since 1889 being as follows :—

	Barrels.
1889	535
1890	750
1891	1,178
1892	1,811
1893	746
1894	981
1895	1,185
1896	1,079
1897	1,382
1898	2,777
1899	3,208

So far as is known the same conditions obtain now as did ten years ago. It is, however, claimed by the fishery officers that the fish are afforded more protection while in the rivers at spawning time than formerly.

The Alewife fishery shows a further decrease of 25 per cent. This is chiefly in the Straits of Northumberland fisheries. During the past three years the catch of these fish has not exceeded forty per cent of the average catch of the previous ten years. The favourable or unfavourable condition of the rivers at the spawning time is the most probable cause of the fluctuations in this fishery—on the Bay of Fundy rivers they ascend in the latter part of April, on the Atlantic Coast in the early weeks of the

SESSIONAL PAPER No. 22

month of May they are to be found, but in the straits they do not go up until June, a month that the conditions necessary for successful propagation of the fish, viz., plenty of water in the streams, is by no means a certainty.

SMELT.

The returns show that in the smelt fishery the results are about fifteen per cent better than last season.

HERRING.

This catch is slightly under that of last season, which was the smallest reported for the last ten years, as the following statement will prove. I have assumed 200 lbs. of fish reported as fresh, as equal to one barrel:—

	Barrels.
1889	38,019
1890	40,424
1891	30,952
1892	43,435
1893	39,981
1894	41,607
1895	70,370
1896	28,018
1897	38,671
1898	25,570
1899	25,255

MACKEREL.

The result of this fishery is a surprise. There were taken in

	Barrels salted.	Lbs. fresh or preserved.
1889	19,751	38,538
1890	23,139	32,928
1891	27,124	6,000
1892	14,322	2,000
1893	10,851	751,850
1894	10,175	669,300
1895	5,907	575,350
1896	8,594	1,318,917
1897	3,558	1,606,091
1898	2,092	1,547,178
1899	2,310	2,774,759

or, assuming that 200 lbs. of the fresh fish equal to a barrel, the result in barrels would be

	Barrels.
1889	19,964
1890	23,304
1891	27,514
1892	18,332
1893	14,610
1894	13,522
1895	8,344
1896	15,189
1897	11,591
1898	9,828
1899	15,684

64 VICTORIA, A. 1901

or about 66 $\frac{2}{3}$ per cent increase over the previous catch, and an average catch of the past eleven years. The fish were found plentiful in Margaret's Bay, Halifax County, for the first time in seven years.

LOBSTERS.

In the lobster fishery there is a decrease of about ten per cent chiefly upon the Atlantic Coast of the district. The close season was well maintained ; it, however, required the constant efforts of the patrol boat on the coast to prevent illegal fishing. In a fishing community there are nearly always some fishermen who will not obey the law unless they are forced to do so. The work is not now done in an open manner, but trawls having traps attached to them are sunk and marks used to locate them, and without some pointers as to where these are set, there is much time occupied in searching grounds with a grapnel. This, however, is successfully done, and if traps are illegally set, they are found and destroyed. Fourteen persons were prosecuted for violation of the lobster season regulations, and convictions obtained in eleven cases.

An instance of the tenacity of life of the lobster under unfavourable conditions came to my notice during the past season. A considerable trade is done in exporting live lobsters to the United States. Several packers employ steamers in connection with their canneries. These gather lobsters over an extensive area of coast from the fishermen and those over 10 $\frac{1}{2}$ inches are placed alive in crates, and taken to Halifax for shipment. They are kept in cars in the water until the day previous to the sailing of the steamer for Boston when they are taken on board the steam tug and carried to Halifax. They are then kept in the water until an hour or so before the steamer sails, when they are iced (if the weather be warm) that is, broken ice is laid upon the top layer of lobsters. In this way they are carried to Boston and are probably 36 hours on the passage, there they are again immersed and are sold to dealers, the empty crates being returned to the packers. Upon the return of one of these empty crates to the lobster factory at Sober Island, a live lobster was found in one, which, no doubt, had survived the passage to Boston and back under the conditions mentioned above, and probably after being several days without being immersed in salt water.

In addition to the persons prosecuted for violation of the lobster fishery regulations, there have been a number of fines inflicted by the local overseers on view and processes were issued in seven other cases, in most of which there were convictions. Ten nets were confiscated, being found set in violation of the law.

SYNOPSIS OF OVERSEERS' REPORTS.

Overseer A. R. McAdam, of Antigonish County, speaking of the increase in the cod, hake and haddock fisheries caused by a more vigorous prosecution of the fishery, says it would have been 50 per cent more if bait had been available, particularly along the north shore between Cape George and Ponds, Merigomish. There was some net fishing for salmon in the West River, but the nets were found and confiscated. There are a number of fish-ways required in several mill dams in his division. Salmon were seen ascending the South and West Rivers in numbers during the spawning season. The guardians are faithful and attend to their work.

Overseer J. W. Davidson, speaking of the increased quantity of shad in his division, says that they were taken at the eastern end of the division, that is, nearer the head of the bay. At the lower part fewer fish were taken than last year. Quite a large increase was noticed in the salmon fishery, notwithstanding the fact that the nets used are those adapted only to the capture of shad. He thinks if suitable nets were used that a large number of these fish in the bay would be captured. Quite a large number of herring come in the bay but little or no effort is made to secure them in the first run. The fish are large and poor, while those that come in the latter part of June are fat but small. He urges a close season for shad all the time they go into the rivers for spawning purposes.

SESSIONAL PAPER No. 22

Overseer Joseph Davis, of Guysborough, reports a shortage in the catch of lobsters in his division, which is attributed to the heavy storm about May 21st, which destroyed about half of the traps set, and the fishermen were unable to replace them.

Overseer A. W. Reid, of Guysborough, says of the decrease of herring that dogfish were so plentiful that fishermen could not keep their nets set for herring. Good prices were paid for lobsters which made up the difference in the quantity. Quite a number of fish-ways are wanted in his division.

Overseer Gaston, East Halifax, says of the four fish-ways in his division, those in the dams at Moser River and Tangier are defective and new ones are required.

Overseer Rowlings, Halifax, says that the vessels owned in his division caught about the same quantity of fish as last year, but the boats fishing in the coast waters have done much better. Alewives have been scarce for the last two years, even in places like Lake Porter and Pelseswick River, where there are no dams or obstructions, no mill refuse or pollution, yet the fish appear only in small quantities as compared with former years. The lobster regulations have been much better observed than they were formerly. There should be fish-ways in the dam at Tangier and also at Laurencetown.

Overseer Kennedy, West Halifax, says that salmon get past Boutelier dam on Nine Mile River under favourable conditions, but gaspereaux cannot. A good fish-way is being built in the dam at Snake Lake, Ingram River. From Halifax West the fishermen have had better success than they have had for many years.

Overseer J. R. Mosher, Hants Co., says the catch of shad was the best for twenty years. Salmon were plentiful but soon went to head waters and were out of reach of nets. He recommends that spawning shad, particularly in the Shubenacadie River be protected by a close season in May and June.

Overseer A. J. McDonald, Pictou Co., says spring herring were plentiful. Owing to the dry season, salmon could not ascend the rivers until the middle of October. Poachers appeared on Barneys River in disguise at night, but escaped arrest and identification.

Overseer James Kitchin, Pictou, reports two dams obstructing the River John in which fish-ways should exist. Four persons were reported by the guardian, Wm. Gammon for violation of the salmon regulations and proceedings commenced which will lead to conviction.

Overseer Nathaniel Forbes reports the only fish-way in his division on east branch St. Mary's River fulfilling its purposes.

I have the honour to be, sir,
Your obedient servant,

ROBERT HOCKIN,
Inspector of Fisheries.

DISTRICT No. 3.

ANNUAL REPORT ON THE FISHERIES OF DISTRICT No. 3, NOVA SCOTIA, BY INSPECTOR L. S. FORD.

MILTON, QUEEN'S Co., N.S., January 2, 1900.

The Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report of Fisheries for District No. 3, Province of Nova Scotia, comprising the counties of Lunenburg, Queen's, Shelburne, Yarmouth, Digby, Annapolis and King's. The requisite statements showing the yield and values by sub-districts, and the amount of capital invested in such fisheries, are also included.

I have to report an increased catch in almost every branch of the fisheries in this district, excepting the lobster industry, and the decrease in that business much more than accounts for the decrease of \$383,071 in the aggregate amount, as shown by the following figures :—

Fishery, District No. 3, 1898	\$4,708,524
“ “ 1899	4,325,453
Decrease.....	\$ 383,091

I am inclined to believe that this result is exaggerated, as the difficulty in procuring accurate statistics last year accounts for the decrease this year. Special pains will be taken the coming season in this direction to discover any error that may have existed, as there does not seem as yet to be any marked falling off in the catch of lobsters in any district to warrant a decrease of over one million dollars in the shipments of live lobsters to foreign markets, especially in the county of Digby.

COD FISH.

The codfishery has been well and successfully prosecuted, both on the banks and shores, showing an increased value of \$400,000 over that of last year's.

MACKEREL.

The mackerel fishery shows a slight improvement over last year, both in salt and fresh fish. One feature of this business causing much speculation is that much of the catch for some years was limited to a few districts, notably, Yarmouth and Lunenburg. In Shelburne and Queen's, particularly where they were once plentiful, they seem now to have disappeared. We are watching with interest whether the law compelling the raising of lobster traps at an earlier date will not allow the mackerel to visit again those harbours which they of recent years so carefully shun.

HADDOCK.

Haddock show an increased catch, which is no doubt owing to the successful production of finnan haddies. Fish food of this kind amounting to \$72,103.20,

SESSIONAL PAPER No. 22

was put up this year, finding a ready market, largely in the upper provinces, insuring a permanent business for this class of fish in the future.

POLLOCK.

Pollock shows a marked increase of more than \$46,000 over the previous year. Hake and sounds also show more than \$183,000 over 1898, while halibut show a decrease of over \$6,000.

As a whole the season of 1899 has been a profitable year for the fishermen of all classes. Prices have ruled high, and the demand for properly cured fish still obtains.

The proposed system of cold storage being inaugurated bids fair to meet the long-felt want of the bait question. It only remains to devise some means to scatter the cordon of voracious dogfish which now infests our coasts, when the fishermen of Nova Scotia will have their business placed on as good a footing as any industry in Canada.

RIVER FISHERIES.

The salmon fishery has nearly doubled its previous catch. For many seasons the salmon fishery is one of the most important in our district, and at the same time one of the most difficult to secure accurate returns for. Caught in large numbers by sportsmen and tourists, salmon enter so largely into home consumption that the officers are unable to arrive at the actual catch. The figures given are largely of fish exported, fresh and smoked.

Trout also are largely in excess of last year. They are caught in large numbers by sportsmen who give no account of their catch. The exportation of trout is seriously affecting rivers that once were full of them, and numbers of people are asking for some regulations to check it.

Shad, for some unexplained reason, show a large decline in the catch, but alewives an increase. The increase of those fish that annually ascend our rivers, I can safely attribute to the increased care taken by the several officers of your department of the rivers in their charge. Although much has been done, much remains. Mill owners have so long dammed the rivers, that they seem impressed with an idea of full ownership, and unless they are carefully watched all the water is retained for the mill, and the fish are left stranded. I have endeavoured to impress upon those people in my district the fact that if any stream has not sufficient water to pass the fish and run the mill, it is a poor mill site, as the fish have the first right on the premises.

All of which is respectfully submitted.

Your obedient servant,

L. S. FORD,
Inspector District No. 3.

NOVA SCOTIA—District No. 1.

Return showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and the Quantity and Value of Fish caught in the Island of Cape Breton, Province of Nova Scotia, for the Year 1899.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.									
		Vessels.		Boats.		Gill Nets.		Trawls.	Salmon, fresh, lbs.	Salmon, salted or smoked, brls.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.				
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Number.								Value.			
																	Number.	Value.	Men.
Cape Breton County.																			
1	Sydney to Glace Bay.....	9	150	2000	50	94	1545	133	990	19800	4950	119	1190	1000	800	7100	1500	2000	19
2	North Sydney to Ball's Creek.....	1	31	750	8	23	336	38	72	1440	475	4	30	.....	680	10000	.....	.....	12
3	George's River to Beavers Cove.....	.....	.....	.....	.....	29	342	37	33	665	158	12	82	.....	28	6000	.....	400	3
4	Grand Narrows to Christmas.....	.....	.....	.....	.....	16	170	30	19	397	119	11	37	.....	120	.....	.....	.....	2
5	North Side East Bay.....	.....	.....	.....	.....	6	64	8	10	210	60	5	12	.....	36	.....	.....	.....	4
6	South Side East Bay.....	.....	.....	.....	.....	4	32	4	6	126	36	.....	.....	.....	16	.....	.....	.....	5
7	Little Bras d'Or.....	5	63	1400	26	20	400	40	110	2700	360	60	480	.....	180	5000	14000	.....	6
8	Little and Big Pond and Sydney Mines.....	.....	.....	.....	.....	15	300	17	45	1500	160	2	16	1300	30	3000	.....	50	7
9	Gabarus, Grand Mira and Big Lake.....	1	27	1000	7	48	2172	183	237	6435	2544	.....	.....	250	530	.....	.....	80	8
10	Louisburg.....	1	19	200	4	27	800	60	175	4375	1225	.....	.....	.....	200	.....	.....	70	9
11	Big Lorraine.....	.....	.....	.....	.....	30	850	65	300	7500	2100	.....	.....	3000	300	.....	.....	120	10
12	Kennington Cove.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
13	Main-à-Dieu and Little Lorraine.....	3	47	1300	17	55	960	132	423	12205	6775	.....	.....	5325	580	.....	.....	53	12
14	Beaulieu to Mira River.....	.....	.....	.....	.....	23	293	52	203	4565	4595	.....	.....	5416	265	.....	.....	3	13
15	Catalone.....	.....	.....	.....	.....	4	30	7	86	1890	845	.....	.....	385	16	.....	.....	3	14
16	Scattarie Island.....	1	19	600	5	50	1500	130	300	6600	1500	20	200	4000	300	15000	.....	25	15
17	Port Morien and South Head.....	1	19	600	7	39	1305	60	141	1820	1128	44	220	.....	326	.....	.....	25	16
18	Wadden's Cove and Black Brook.....	.....	.....	.....	.....	33	848	48	68	1360	756	109	545	1824	457	.....	.....	3	17
19	Amaguadres Pond to Piper's Cove.....	.....	.....	.....	.....	24	336	41	33	691	212	26	70	.....	135	.....	.....	2	18
20	Big Beach to Shunacadie.....	.....	.....	.....	.....	16	192	30	19	384	98	13	37	.....	77	.....	.....	7	19
21	Big Pond to Irish Cove.....	.....	.....	.....	.....	22	286	30	27	582	162	23	65	.....	84	.....	.....	4	20
Totals.....		22	375	7850	124	578	12761	1145	3297	75245	28258	448	2984	22500	5160	46100	1500	16400	454
Values.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4500	20640	461	30	1968	6810

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH												FISH PRODUCTS.		TOTAL VALUE OF ALL FISH.	Number.				
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gas- pereau, brls.	Eels, brls.	Flounders, lbs.			Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.
Cape Breton County.																					
1	Sydney to Glace Bay.....	33024	.....	6050	10	.....	941	55	18	13900	1000	5500	40	.....	.....	55	.....	5150	410	42,218 55	1
2	North Sydney to Ball's Creek.....	.....	.....	1270	.....	.....	25	.....	.....	3600	.....	.....	.....	2	.....	.....	.....	.....	.....	8,535 00	2
3	George's River to Beavers Cove.....	.....	20	523	.....	.....	.....	.....	.....	.....	.....	400	.....	10	.....	.....	.....	12	5	2,543 10	3
4	Grand Narrows to Christmas .....	.....	144	285	.....	.....	.....	.....	.....	.....	.....	500	.....	.....	.....	.....	.....	20	20	2,431 00	4
5	North Side East Bay.....	.....	.....	63	.....	.....	.....	.....	.....	.....	.....	500	.....	6	.....	.....	.....	.....	4	487 00	5
6	South Side East Bay.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	101 50	6
7	Little Bras d'Or	89568	.....	1000	18	.....	600	150	40	9000	.....	9000	.....	22	2200	42	35	380	350	30,068 10	7
8	Little and Big Pond and Sydney Mines.....	.....	.....	50	.....	.....	10	.....	.....	1400	.....	.....	.....	15	500	30	14	50	100	1,148 00	8
9	Gabarus, Grand Mira and Big Lake.....	127152	13350	2800	.....	.....	150	10	.....	.....	3010	30	.....	.....	.....	30	20	1400	21	108,104 90	9
10	Louisburg.....	20160	4000	1000	.....	.....	400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1000	110	31,547 00	10
11	Big Lorraine.....	.....	5000	1500	.....	.....	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1500	300	37,450 00	11
12	Kennington Cove.....	29472	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,894 40	12
13	Main-à-Dieu and Little Lorraine.....	44880	.....	1950	.....	.....	425	5	18	355	.....	.....	3	.....	.....	14	.....	1200	25	22,884 25	13
14	Baulieu to Mira River	22224	.....	715	.....	.....	85	2	12	260	.....	.....	14	.....	.....	6	.....	630	14	10,092 50	14
15	Catalone.....	.....	.....	300	.....	.....	50	.....	4	80	.....	.....	.....	.....	.....	.....	.....	180	4	1,567 00	15
16	Scattarie Island.....	10656	346	4000	.....	.....	120	10	1000	20000	.....	.....	.....	.....	2000	20	.....	1000	500	32,123 70	16
17	Port Morien and South Head.....	57264	.....	950	10	1300	20	.....	3000	24100	.....	.....	.....	6	.....	26	15	675	37	25,662 80	17
18	Madden's Cove and Black Brook.....	42672	.....	580	13	.....	141	.....	1300	15000	.....	.....	16	11	.....	20	.....	457	19	18,149 80	18
19	Amaguadres Pond to Piper's Cove.....	.....	166	435	.....	.....	.....	.....	.....	.....	200	1300	.....	2	.....	.....	.....	29	26	3,367 70	19
20	Big Beach to Shunacadie.....	.....	15	125	.....	.....	.....	.....	.....	.....	100	400	.....	35	.....	.....	.....	19	16	1,352 70	20
21	Big Pond to Irish Cove.....	.....	25	222	.....	.....	.....	.....	.....	.....	.....	800	.....	4	.....	.....	.....	20	24	1,531 00	21
Totals.....		477072	23066	23827	51	1300	3567	232	5392	87695	1300	21410	103	113	4700	213	84	13722	1986	.....	.....
Values.....		95414	115330	95308	510	39	10701	522	10784	8769	130	1071	412	1130	235	852	168	4116	2979	387,260 00	.....

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, &c.—
Nova Scotia—Continued.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.										
	Vessels.		Boats.		Gill Nets.		Trawls.	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Number.				
	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.									Value.			
Inverness County.																			
1	Port Hood	1	18	500	5	65	1500	120	300	9000	3600	200	1400	400	10000	800	1	46752	
2	Little Mabou					18	200	30	40	1200	300	25	100	80	3000	100	2	.....
3	Seaside					10	150	25	70	2000	700	30	150	75	6000	100	3	19200	
4	Little Judique					25	300	50	80	2500	800	40	200	250	60000	180	4	.....
5	Judique					15	150	20	30	1200	300	20	70	50	8000	100	5	.....
6	Long Point					20	300	20	80	2400	600	30	120	100	4000	200	6	20640	
7	Creignish					20	240	20	50	1500	400	20	100	200	2000	120	7	.....
8	Low Point					25	250	25	80	2500	800	60	300	150	2000	100	8	.....
9	Port Hastings	2	64	2500	20	20	300	25	60	1800	500	30	150	125	3000	300	9	.....
10	Port Hawkesbury	3	141	3500	12	10	200	15	150	4500	1500	20	80	75	2500	70000	10	.....
11	West Bay to Malagawatch					69	803	85	280	5620	1066	20	49	185	750000	.....	11	.....
12	North and South side River Dennis					47	556	63	186	3750	733	16	40	62	205000	.....	12	.....
13	Mabou Harbour and Coal Mines					23	425	46	25	750	300	3	56	10	300	200	13	20664	
14	Port Bain and Broad Cove					13	225	26	15	450	180	.....	.....	5	200	100	14	3408
15	Whycocomagh					9	125	18	20	300	150	8	100	12	.....	.....	15	.....
16	Lake Ainslie					6	72	15	6	180	50	.....	.....	.....	.....	.....	16	.....
17	Pleasant Bay to Pollett's Cove					56	788	154	10	1200	850	.....	.....	.....	.....	.....	17	48792
18	Cheticamp Point to Cape Rouge	22	260	3400	100	133	8690	451	105	3188	690	17	232	2520	4500	.....	18	49008
19	Grand Etang					31	1240	109	47	2365	564	10	55	300	1500	200	19	19008	
20	Friar's Head					23	690	72	59	3450	1770	5	27	150	2550	.....	20	3216
21	Delaney's Cove to B. Cove Chapel	2	23	800	16	109	2680	221	126	5605	5620	41	218	801	7600	260	21	13172	
22	Margaree Island					21	528	80	11	800	600	8	45	107	.....	.....	22	8880
23	Margaree River and Harbour					25	235	58	23	660	290	.....	.....	30	5000	.....	23	5016
Totals		30	566	10700	153	793	20644	1751	1853	56918	21763	603	3472	5687	1056000	72760	2073	257756	
Values														638	7	10560	8731	31095	51551

RETURN showing the Kinds and Quantities of Fish and Fish Products in the Province of Nova Scotia, &c.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													FISH PRODUCTS.			TOTAL VALUE OF ALL FISH.	Number.		
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gas- pereaux, brls.	Bass, lbs.	Eels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.
Inverness County.																					
1	Port Hood.....	1700	...	6000	800	2300	600	...	100	500	30	...	...	...	...	80	...	800	200	40	27,936 40
2	Little Mabou	200	...	400	30	60	20	...	40	100	4	...	...	...	...	5	...	20	20	10	1,570 00
3	Seaside.....	100	...	500	40	100	...	...	50	200	12	...	...	...	...	15	...	30	40	20	5,249 00
4	Little Judique.....	25	...	400	10	20	...	...	50	200	10	...	...	...	...	10	...	10	50	10	2,116 60
5	Judique.....	20	...	200	...	...	...	...	1000	1000	...	...	...	...	...	5	...	8	20	...	750 40
6	Long Point.....	50	...	500	10	...	...	...	1000	800	...	...	...	...	...	5	...	10	30	...	5,265 00
7	Creignish.....	50	...	400	20	...	...	...	100	100	...	...	...	...	...	...	...	8	25	...	1,481 30
8	Low Point.....	30	...	300	15	...	...	...	150	200	...	...	...	...	...	...	...	10	20	...	974 00
9	Port Hastings.....	20	...	400	10	...	...	...	300	5000	20	...	10	...	...	4	...	20	20	...	1,275 00
10	Port Hawkesbury.....	150	...	500	...	...	...	...	1000	1500	24	...	...	...	...	30	...	300	35	...	28,073 50
11	West Bay to Malagawatch.	130	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	65	33	...	9,029 00
12	North and South side River Dennis.	48	...	...	...	...	...	...	...	...	15	...	20	...	...	...	...	20	15	...	3,590 50
13	Mabou Harbour and Coal Mines.	135	...	250	30	30	20	150	400	3500	5	100	27	180	440	...	...	...	100	...	5,527 30
14	Port Bain and Broad Cove.	100	...	...	25	5	...	20	200	5000	...	...	...	...	...	4	...	60	40	...	1,573 85
15	Whycocomagh.....	110	...	...	...	...	...	...	1000	2000	...	...	...	...	...	...	...	50	15	...	725 50
16	Lake Ainslie.....	...	...	...	...	...	...	...	4000	1000	90	...	65	...	...	...	...	...	...	...	1,460 00
17	Pleasant Bay to Pollett's Cove.	405	...	...	10	...	...	400	...	...	...	...	...	...	...	...	...	295	405	...	16,549 20
18	Cheticamp Point to Cape Rouge.....	13700	43	...	985	527	372	4080	1500	1225	...	...	165	...	...	3410	3710	9870	5850	3250	123,253 60
19	Grand Etang.....	1250	...	...	80	100	...	600	...	2000	...	...	5	...	...	300	50	500	250	100	13,145 60
20	Friar's Head.....	950	...	...	50	65	...	500	...	...	...	...	...	...	...	150	35	400	180	100	7,174 45
21	Delaney's Cove to B. Cove Chapel.....	7460	...	...	570	258	258	1360	300	500	15	...	...	...	...	665	238	2020	450	290	45,737 10
22	Margaree Island.....	800	...	...	32	29	100	500	...	...	125	...	...	...	...	30	51	110	42	...	6,718 25
23	Margaree River and Harbour.....	...	...	...	...	...	...	...	500	1000	...	...	...	...	...	...	...	...	...	...	2,723 20
Totals.....		27433	43	9850	2717	3494	1370	7610	1169	25825	350	100	315	180	440	4725	4094	14606	7840	3820	.....
Values		109732	430	296	8151	7861	685	761	1169	1291	1400	-5	3150	720	22	18912	8188	4382	11760	1910	311,898 75

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity of Fish, &c.—Nova Scotia—Con.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.															
	Vessels.		Boats.		Gill Nets.		Trawls.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, blz.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, blz.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, blz.						
	Number.	Tonnage.	Value.	Men.	Number.	Fathoms.	Value.	Number.																
<i>Richmond County.</i>																								
1	Arichat and Petit de Grat.	4	151	2100	28	166	1582	226	1420	28400	13900	145	575	560	...	2450	5450	5043	400	45336	329	2075	3	1
2	Cape Auguet, Janvrin's Island, Port Royal and West Arichat	4	112	1500	16	172	1574	220	1329	16080	11140	156	620	25	...	1967	5150	7480	100	34896	3312	1598	2	2
3	Rocky Bay and Cape Le Ronde	2	72	750	21	77	868	113	940	8800	8400	35	155	...	...	567	1200	535	150	9936	...	1748	5	3
4	Descousse, Poulamond and Martinique.	4	179	2000	54	33	200	46	194	4850	1700	9	45	...	...	367	6850	4860	67	...	...	2726	15	4
5	St. Peter's.	3	75	1350	23	10	140	14	135	2970	420	...	...	...	...	150	...	...	75	...	...	700	...	5
6	River Bourgeoise.	10	287	4000	80	29	480	40	150	3000	400	...	...	...	...	450	...	...	25	33072	...	4500	...	6
7	Barachois St. Louis.	...	...	...	...	19	200	25	100	2200	300	5	15	...	...	300	...	...	...	...	...	550	...	7
8	River Inhabitants and Basin	6	130	2000	25	144	1400	150	1400	28000	4200	...	...	...	...	3000	...	...	200	...	...	200	...	8
9	Port Maledin and Gut of Canso	8	312	2400	50	60	690	80	800	16000	2400	...	...	...	...	1250	...	...	400	...	...	250	...	9
10	West Bay	...	...	...	...	20	160	20	60	1200	180	15	45	...	...	100	...	...	...	...	...	260	...	10
11	Fourchu to St. Esprit.	...	...	...	...	65	1650	150	780	6730	1915	35	175	...	...	350	5000	500	470	75348	...	3550	10	11
12	L'Archevêque to Point Michaud	...	...	...	...	87	1695	207	660	16800	4400	113	390	750	8	720	1500	...	660	76978	...	900	3	12
13	L'Ardoise, L. L'Ardoise and Rockdale.	4	75	2500	26	303	8880	906	3840	46330	21400	104	1140	300	9	4680	28000	25000	4300	45168	...	6280	28	13
14	Grande Grève, Indian Reserve, and St. Peter's East	1	37	200	8	55	1400	118	155	3400	900	4	40	...	...	700	...	...	305	27888	...	1010	...	14
Totals		46	1430	18800	331	1240	20829	2315	11963	184760	71655	621	3200	1635	17	17051	53150	43418	7152	348622	3641	26287	66	
Values		...	...	...	...	...	...	...	...	...	...	...	...	327	2	68204	532	5210	107280	69724	18205	105148	660	

SESSIONAL PAPER No. 22

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS	KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.	
		Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Seal skins, number.
	<i>Richmond County.</i>																				
1	Arichat and Petit de Grat.....	7400	1433	1746	212	340	1149	1020	50	25	7000	33	75	3100		40	100	1850	370	5	46,404 87
2	Cape Auguet, Janvrin's Island, Port Royal and West Arichat.....	8600	1305		30	150	752	3975	25		4000	111	54	30530		14	117	1200	264	3	50,253 05
3	Rocky Bay and Cape Le Ronde.....	7460	267		2		180	2285			3000	22	45	52475		19	110	1750	245		19,741 45
4	Descousse, Poulamond and Martinique..	654	174		1		43	5600			9400	30	54	5500		16	108	1945	434		18,288 07
5	St. Peter's.....		100										10					280	30		5,054 00
6	River Bourgeoise.....		200															1820	100		28,085 40
7	Barachois St. Louis.....		250								4000	50	20					220	20		4,846 00
8	River Inhabitants and Basin.....		100								5000	300	25					80	20		17,854 00
9	Port Malcolm and Gut of Canso.....		100									700						160	10		15,163 00
10	West Bay.....												15						5		1,357 50
11	Fouchu to St. Esprit.....		410		120	52	270	8000	600			100	43	16000		271	4800	1280	210		54,258 60
12	L'Archevêque to Point Michaud.....	1090	600		107	30	245	3400	1200			78	22	8800		80	1050	403	152		39,413 45
13	L'Ardoise to L. L'Ardoise and Rockdale..	5870	4300		78	50	1530	12000	900			705	24	18000		225	300	4800	2800		149,996 55
14	Grand Grève, Indian Reserve and St. Peter's East.....	5300	590		56	11	273	7000	1600			46	32	7000		60	52	1190	600		23,164 10
	Totals.....	36284	9829	1746	606	633	4442	43280	4375	25	32400	2175	419	141405		725	6637	16978	5260	8	
	Values.....\$	1088	29487	105	1363	316	8884	4328	438	250	1620	8700	4190	7070		1580	13274	5093	7890	10	473,880 04

RETURN showing the Number, Tonnage and Value of Vessels and Boats, and the Quantity of Fish, &c.—Nova Scotia—Con.

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.							Number.	
		Vesse's.		Boats.		Gill Nets.		Trawls.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, salted, brls	Herring, salted, brls	Herring, fresh, lbs.	Mackerel, fresh, lbs	Mackerel, salted, brls.		
		Number.	Tonnage.	Value.	Men.	Number.	Fathoms.	Value.	Number.									Value.
Victoria County.				\$			\$											
1	Meat Cove and Bay St. Lawrence.	2	39	700	9	20	320	40	24	960	480	..	..	8	30	1000	..	60
2	Cape North to White Point.	..	..	..	..	81	1624	293	177	4594	2314	5	720	20	230	7000	..	323
3	New Haven and Neil's Harbour.	..	..	..	..	90	3600	125	180	3780	1944	11	..	..	330	250	..	15
4	Green Cove ..	..	..	..	..	12	180	27	18	378	180	2	..	600	..	..	..	7
5	New Campbellton, Big Bras d'Or and Bird Island.	..	..	..	..	42	180	38	35	700	170	20	..	37	85	..	..	3
6	Englishtown...	..	..	..	..	24	200	44	50	1000	200	20	..	..	410	..	..	22
7	Smoky North Shore and Morrison Cove.	..	..	..	..	10	100	32	36	880	288	..	..	5	13	..	..	11
8	Wreck Cove to Breton Cove.	..	..	..	..	33	330	77	138	3349	1104	..	..	3	58	..	..	20
9	Little River to Barachois.	..	..	..	..	30	300	62	115	2830	920	..	..	7	35	..	..	38
10	North and South Bay, Ingonish.	2	27	450	6	147	2056	207	400	8800	2800	90	..	41	220	8400	4600	53
11	North Side Little Narrows.	..	..	..	..	17	124	17	28	688	84	4	..	..	23	..	..	11
12	South Side Little Narrows to Jamesville.	..	..	..	..	51	437	67	114	64	457	36	..	..	116	91300	1810	..
13	Iona to Washabuck ..	..	..	..	..	22	158	31	32	42	163	16	..	..	51	15700	600	..
14	Kemp Head, Boularderie and Big Harbour.	..	..	..	..	39	235	40	34	63	172	8	..	..	69	31100	..	..
15	Plaster Mines, Baddeck and Inlet Shore.	..	..	..	..	23	200	23	33	123	323	2	..	..	87	16200	1000	..
Totals.....		4	66	1150	15	641	10044	1033	1414	28212	11599	214	1198	723	1757	170950	8010	547
Values.....													1653	108	10845	7028	1709	961

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.															TOTAL VALUE. OF ALL FISH.	Number.				
		Lobsters, preserved in cans, lbs.	Lobsters, fresh, in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or gas- pereau, brls.	Kels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squids, brls.			Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	
1	Victoria County.	22012	...	200	...	100	15	...	11000	...	...	...	...	...	...	200	...	80	...	1,974 00	1
2		25140	...	1420	...	100	15	...	2500	...	...	...	...	...	...	...	...	900	...	19,679 15	2
3		4800	...	2290	14	225	200	125	...	...	...	...	...	...	...	155	...	4420	250	19,909 50	3
4		...	...	200	...	75	...	20	400	...	...	...	...	...	...	20	...	300	200	11,640 00	4
5		100	815 00	5
6		4080	...	1060	...	225	85	24	...	...	...	...	...	...	...	1250	...	140	...	12,721 25	6
7		36144	...	99	...	12	...	...	...	...	...	...	...	...	...	7	...	55	12	1,602 50	7
8		...	...	379	...	65	...	...	...	...	...	...	...	...	...	23	...	200	33	9,718 30	8
9		...	...	195	...	51	...	...	...	...	...	...	...	...	...	21	...	118	30	1,837 40	9
10		27960	...	5482	...	1300	165	50	...	...	...	...	...	...	...	...	...	2650	335	36,114 75	10
11		61	600	...	25	46	50	1600	14	30	6	1,682 00	11
12		...	...	393	...	...	8	...	...	100	6600	11	24	120	2700	...	...	65	61	5,245 00	12
13		...	...	227	...	...	...	...	...	...	400	6	4	...	...	...	...	20	30	1,678 00	13
14		...	...	92	...	4	...	4	700	...	1000	5	8	...	...	1	33	85	34	1,481 50	14
15		7	1700	5	9	21	10	5	1,272 50	15
Total.....		120436	151	12218	14	2057	473	223	14600	700	9700	52	91	170	4300	1677	133	9299	996	.....	.....
Values		24087	755	48872	140	6171	1064	446	1460	70	485	208	910	680	215	6708	306	2790	1194	127,370 85	.....

RECAPITULATION

OF the Yield and Value of the Fisheries of the Island of Cape Breton, for the Year 1899.

Kinds of Fish.		Quantity.	Rate.	Value.
			\$ cts.	\$ cts.
Salmon, fresh	Lbs.	64,304	0 20	12,860 80
" preserved	Cans.	787	0 15	118 05
" pickled	Brls.	1,015	15 00	15,225 00
Herring, pickled	"	29,655	4 00	118,620 00
" fresh or frozen	Lbs.	1,326,200	0 01	13,262 00
" smoked	"	1,500	0 02	30 00
Mackerel, fresh	"	140,588	0 12	16,870 56
" pickled	Brls.	10,226	15 00	153,390 00
Lobsters, preserved in cans.	Lbs.	1,203,886	0 20	240,777 20
" fresh in shell	Cwt.	26,858	5 00	134,290 00
Cod, dried	"	89,765	4 00	359,060 00
" tongues and sounds	Brls.	174	10 00	1,740 00
Haddock, fresh	Lbs.	47,434	0 03	1,423 02
" dried	Cwt.	18,170	3 00	54,510 00
" smoked finnan haddies	Lbs.	1,746	0 06	104 76
Hake, dried	Cwt.	4,805	2 25	10,811 25
" sounds	Lbs.	2,003	0 50	1,001 50
Pollock	Cwt.	10,057	2 00	20,114 00
Halibut	Lbs.	153,185	0 10	15,318 50
Trout	"	18,065	0 10	1,806 50
Shad	Brls.	25	10 00	250 00
Smelts	Lbs.	89,335	0 05	4,466 75
Alewives	Brls.	2,680	4 00	10,720 00
Bass	Lbs.	100	0 05	5 00
Eels	Brls.	938	10 00	9,380 00
Oysters	"	350	4 00	1,400 00
Flounders	Lbs.	146,105	0 05	7,305 25
Tom cods	"	36,340	0 05	1,817 00
Squid	Brls.	7,343	4 00	29,372 00
Coarse and mixed fish	"	10,968	2 00	21,936 00
fish oil	Galls.	54,605	0 30	16,381 50
fish used as bait	Brls.	16,082	1 50	24,123 00
" manure	"	3,820	0 50	1,910 00
seal skins	No.	8	1 25	10 00
Total for 1899				1,300,409 64
" 1898				1,061,235 45
Increase				239,174 19

STATEMENT

SHOWING the Number and Value of Fishing Vessels, Boats, Nets, &c., in the District No. 1 of Nova Scotia, for the Year 1899.

	Value.	Total.		Value.	Total.
	\$	\$			
102 vessels, 2,377 tons	38,500		74 lobster canneries	49,166	
3,252 boats	64,278		208,948 lobster traps	93,101	
18,527 gill-nets, 345,135 fathoms	133,275				142,267
5 seines, 830 fathoms	1,500		52 freezers and icehouses	3,530	
3 trap-nets	1,300		907 smoke and fish houses	30,123	
1,886 trawls	10,854		259 piers and wharfs	69,756	
25 weirs	500		68 tugs, steamers and smacks	9,663	
195 smelt nets	10,015				113,072
15,865 hand lines	9,194				
		269,416	Total value		524,755

NOVA SCOTIA—District No. 2.

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and the Quantity of Fish caught in the District No. 2, Province of Nova Scotia, for the Year 1899.

Number.	FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.				KINDS OF FISH.				
	Vessels.				Boats.			Gill Nets.			Trawls.		Salmon, fresh, lbs.	Herring, salt- ed, brls.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters preserved in cans, lbs.	Number	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.							
<i>Antigonish County.</i>																			
1	Harbour Bouché, Linwood and Cape Jack	1	10	200	3	75	721	110	302	7170	1325	45	133	760	900	1800	100	35472	1
2	Tracadie, Bayfield, Monks Head and South Side Antigonish Harbour					60	700	72	130	5700	3570	16	65	12000	400	137500	50	11328	2
3	North Side Harbour, Lakeville, Ballantyne's Cove, and South Side Cape George					49	802	68	131	3531	957	46	225	9800	385	1600	32	42432	3
4	North Side Cape George and Georgeville					25	378	34	65	1418	356	28	149		146	300	25	12768	4
5	Malignant Cove, Doctors Brook, Arisaig, Knoidart and Moidart					34	543	49	104	3204	1654	24	129	5100	233	1900	93	28848	5
	Totals.	1	10	200	3	243	3144	333	732	21023	7862	159	701	27660	2064	143100	300	130848	
	Values.													5532	8256	17172	4500	26169	

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.				
		Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspr., brls.	Bass, lbs.	Eels, brls.	Clams, brls.	Oysters, brls.	Flounders, lbs.	Squid, brls.			Coarse & mix- ed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as man- ure, brls.
<i>Antigonish County.</i>																				
1	Harbour Bouché, Linwood and Cape Jack	135	10	155	200	300	400	....	200	10	3	....	17050	5	19	60	850	180	16,050	1
2	Tracadie, Bayfield, Monks Head and South Side Antigonish Harbour	35	45	....	....	300	10000	20	3000	45	10	69	3300	....	5	10	350	58	26,179	2
3	North Side Harbour, Lakeville, Ballantyne's Cove and South Side Cape George	472	27	322	640	1200	1500	54	....	12	....	....	21700	15	44	425	371	210	18,223	3
4	North Side Cape George and Georgeville.	149	14	428	....	....	....	....	950	....	....	....	4260	17	2	174	43	64	5,680	4
5	Malignant Cove, Doctors Brook, Arisaig, Moidart and Knoidart....	100	191	1670	4623	....	....	....	300	....	....	....	2200	....	....	902	100	144	17,029	5
	Totals.....	891	290	2575	5463	1800	11900	74	4450	67	13	69	48510	37	70	1571	1714	656	.....
	Values.....	\$ 3564	870	5791	2732	180	595	296	445	670	26	276	2425	148	140	471	2572	328	83161	

Number.	DISTRICTS.										FISHING VES- SELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.								
	Colchester County.										Boats.		Gill Nets.				Weirs.		Salmon, fresh, lbs.	Herring, salted, lbs.	Herring, fresh, lbs.	Herring, smoked, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Number.
											Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
1 Sterling	14	210	18	20	600	150	20	240	6000	2260	6	800	21000	20208	20	3000	4000	130	1600	25	1						
2 Stewiacke	111	1110	222	240	6000	2260	240	6000	2260	6	800	21000	20208	20	3000	4000	130	1600	25	2							
3 Five Islands	7	219	20	20	3200	480	8	3200	480	16	3200	9850	2860	20	3000	4000	12	300	6	3							
4 Economy	8	275	32	18	6300	1260	18	6300	1260	5	1500	32533	9850	20	3000	4000	12	300	6	4							
5 Little Bass River to Highland Village	18	540	41	21	7560	1470	21	7560	1470	5	1500	32533	9850	20	3000	4000	12	300	6	5							
6 Great Village to Queen's Village	21	700	42	21	7560	1470	21	7560	1470	5	1500	32533	9850	20	3000	4000	12	300	6	6							
Totals	179	3045	375	307	23660	5620	307	23660	5620	27	5500	101828	20208	20	3000	4000	142	1900	31	31							
Values...												20365	20365	80	30	80	568	57	93	93							

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and Quantities of Fish—Nova Scotia—Con.

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.						Number.		
	Cumberland County.				Vessels.		Boats.		Gill Nets.		Weirs.		Salmon, fresh, lbs.	Herring, salted, brls	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.			
					Number.	Tonnage.	Value.	Men.	Number.	Value.	Fathoms.	Number.								Value.	
1	Pegwash, Port Philip and Gulf Shore.	...	...	...	269	5372	133	328	6513	1415	...	...	...	...	...	1100	1200	489168	1	
2	Wallace.	...	...	...	29	243	29	...	...	...	...	...	245	...	...	...	180	...	...	2
3	River Philip.	...	...	...	17	150	17	34	...	225	...	...	4000	...	...	...	...	...	...	3
4	Maccan and Nappan	...	...	...	3	75	6	3	80	45	...	...	500	...	...	...	...	...	...	4
5	Minudie to Apple River.	...	...	...	5	100	10	10	380	400	...	...	3000	60	500	...	...	...	...	5
6	Advocate.	...	...	...	5	140	14	11	220	100	...	...	500	40	600	200	...	...	...	6
7	Spencer's Island	...	...	...	5	150	10	8	175	75	...	...	400	60	...	...	...	...	...	7
8	Port Greville.	...	...	...	6	160	13	12	215	120	...	...	500	70	600	200	...	...	...	8
9	Parrsboro'.	...	...	...	4	100	9	7	160	115	...	...	800	40	700	200	...	...	...	9
10	Two Islands.	...	...	...	2	80	4	2	75	50	...	...	600	75	...	...	...	...	...	10
Totals				3	65	800	11	345	6570	245	415	7818	2545	12	335	10545	345	2400	1700	1380	489168
Values				2109	1380	24	34	166	97833

RETURN showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

SESSIONAL PAPER No. 22

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH. \$ cts.	Number.					
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or gaspereau, brls.	Bass, lbs.	Eels, brls.			Clams (in shell).	Oysters, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
<i>Cumberland County.</i>																					
1	Pugwash, Port Philip and Gulf Shore.....	.....	.....	.....	.....	.....	.....	300	.....	59650	.....	500	5	44	523	.....	.....	2420	2400	108,121 00	1
2	Wallace.....	.....	.....	.....	.....	.....	.....	200	.....	10000	357	.....	10	.....	756	.....	.....	112	.....	5,311 00	2
3	River Philip.....	.....	.....	.....	.....	.....	.....	.....	4	.....	150	500	25	.....	.....	.....	.....	.....	.....	1,740 00	3
4	Maccan and Nappan.....	.....	.....	.....	.....	.....	.....	100	20	1000	15	.....	.....	.....	.....	.....	.....	.....	.....	420 00	4
5	Minudie to Apple River.....	60	.....	25	45	200	50	200	394	400	20	.....	.....	.....	.....	.....	15	5	.....	5,584 00	5
6	Advocate.....	90	.....	30	20	100	30	50	.....	.....	.....	.....	.....	.....	.....	.....	10	6	.....	944 00	6
7	Spencer's Island.....	200	.....	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	5	.....	1,460 00	7
8	Port Greville.....	225	.....	125	.....	.....	.....	60	.....	.....	.....	.....	.....	.....	.....	.....	20	15	.....	1,754 00	8
9	Parrsboro'.....	50	2	50	5	.....	25	150	5	.....	.....	.....	.....	.....	.....	.....	10	6	.....	919 00	9
10	Two Islands.....	275	.....	45	.....	.....	15	100	10	.....	.....	.....	.....	.....	.....	.....	10	12	.....	1,896 00	10
	Totals.....	900	2	375	70	300	120	3475	1160	433	71050	542	1000	40	44	1279	75	2581	2400	.....
	Values.....\$	3600	20	1125	158	150	240	347	116	4330	3552	2168	100	400	88	5116	22	3871	1200	128,149 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.,

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.							FISHING MATERIALS.				
		Vessels.				Boats.			Gill Nets.			Weirs.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.
	<i>Hants County.</i>			\$			\$				\$		\$
1	Maitland to Shubenacadie					12	90	12	12	240	96		
2	Shubenacadie to Grand Lake					13	65	13	13	250	75		
3	Walton to Maitland					8	265	8	8	2450	310	3	425
4	West Hants	1	18	300	2	24	690	30	32	4845	750	7	620
	Totals	1	18	300	2	57	1110	63	65	7785	1231	10	1045
	Values	\$											

Number.	DISTRICTS.	VESSELS.				BOATS.			GILL NETS.						
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.
				\$			\$				\$				
1	West Pictou					155	3875	157	120	3600	840	2700		5000	2000
2	Pictou Island					60	1360	120	38	780	200			2000	
3	Central Division	1	30	400	3	10	250	12	20	400	100			76000	1600
4	Southern Division					34	437	43	68	2270	947	3750	11	38000	550
5	Merigomish Island					13	240	12	23	1082	560	2900			
6	North Beach					6	100	6	15	1028	806	5400		1000	
7	Ponds					16	385	19	34	2274	1719	9100		17000	300
8	Lismore					12	166	14	25	784	456	1450			
	Totals	1	30	400	3	306	6813	383	343	12218	5628	25300	11	139000	4450
	Values	\$										5060	44	1390	534

SESSIONAL PAPER No. 22

and the Quantity and Value of all Kinds of Fish, &c.—Nova Scotia—Continued.

KINDS OF FISH.																TOTAL VALUE OF ALL FISH.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Cod, dried, cwt.	Haddock, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Clams, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Fish as bait.		
2500	.....	.....	.....	.....	.....	.....	500	.....	.....	20	.....	.....	.....	.....	.....	\$	1
200	.....	.....	.....	.....	.....	.....	800	5	.....	141	.....	.....	.....	.....	.....	630	2
5240	75	4500	2500	14	.....	.....	400	95	.....	3	.....	75	.....	.....	.....	734	3
.....	.....	.....	.....	105	26	24	4000	670	1500	196	4	100	2000	1000	4	1,208	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10,344	.....
7940	75	4500	2500	119	26	24	5700	770	1500	360	4	175	2000	1000	4	.....	.....
1588	300	45	50	476	78	48	570	7700	75	1440	40	350	100	50	6	12,916	.....

KINDS OF FISH.																TOTAL VALUE OF ALL FISH.	Number.
Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Clams, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
227328	.....	45	.....	.....	.....	400	10000	15	8	20	10	600	10	1100	750	\$	1
129840	.....	.....	.....	450	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	450	49,294	2
.....	.....	360	50	200	.....	6000	6000	60	45	.....	80	.....	.....	.....	.....	27,676	3
15984	.....	85	.....	.....	.....	300	4200	3	4	8	.....	.....	.....	130	50	4,902	4
12000	.....	.....	.....	.....	.....	.....	4000	.....	50	.....	.....	.....	.....	110	40	5,305	5
.....	.....	.....	.....	4	.....	400	11600	.....	.....	.....	.....	.....	.....	60	.....	3,865	6
23952	165	15	.....	76	35	400	8000	.....	.....	.....	.....	.....	32	60	80	1,809	7
10272	245	7	.....	17	.....	100	.....	.....	.....	.....	.....	.....	.....	86	35	8,469	8
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,792	.....
419376	410	502	50	747	35	7600	43800	78	107	28	90	600	42	1846	1405	.....	.....
83875	2050	2048	150	1681	18	760	2190	312	1070	56	360	30	12	2769	703	105,112	.....

SESSIONAL PAPER No. 22

Boats, Nets, &c., and Quantities of Fish—Nova Scotia—Continued.

OR MATERIALS.					KINDS OF FISH.									
Seines.			Trap Nets.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.
Number.	Fathoms.	Value.	Number.	Value.										
		\$		\$										
4	250	260			750			30			37	11904		1
					150			25			4	29000	134	2
1	60	25			820			45			5	47616	140	3
					6800	100	1000	75	2000			32160		4
1	60	25			620			100			1			5
					375			150	1000		2			6
					400			110			2			7
								600	5000		5	53088	258	8
								200	1500		5	21838		9
1	50	40			1500	200		90	2000		13			10
3	290	375	3	1750	1800	1000		3450	26000	6000	560	220272	422	11
19	1369	1950	14	5600	2300	2400	1000	520	25400	30954	125	311472	1128	12
9	1125	1700	33	6900	6000	300		502	29000	71850	120	73392	200	13
8	890	1000	1	150	1200			3548	1000000	300000	50	30144		14
46	4085	5375	51	14400	22715	4000	2000	9445	1091900	408804	929	825936	2282	
					4543	600	400	37780	10919	49056	13935	165187	11410	

RETURN showing the Quantity and Value

Number.	DISTRICTS.	KINDS							
		Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked finnan haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.
	<i>Guysborough County.</i>								
1	Ecum Secum.....	425			40				10
2	Marie Joseph.....	540			60				8
3	Liscomb, Spanish Ship Bay and Gegoggin.....	600			82				35
4	St. Mary's Bay and River.....	110			10				5
5	Wine Harbour.....	30			3				1
6	Indian Harbour and Lake.....	80			8				1
7	Holland Harbour and Indian River.....	50			6				3
8	Port Beckerton.....	410			50		175	200	5
9	Fisherman's Harbour.....	275			30				4
10	Country Harbour and Isaac's Harbour.....	175			15				15
11	Isaac's Harbour to Whitehead.....	7650			2260		350	400	890
12	Whitehead to Canso.....	13474	9	1498000	700	150000	1200	190	2400
13	Canso to Salmon River.....	1280	4	108000	1166		331	130	1100
14	Salmon River to Antigonish County line including Guysborough, Cook's Cove, North Shore and Strait of Canso.....	880	4	115400	330		30	20	815
	Totals.....	25979	17	1721400	4760	150000	2086	940	5292
	Values.....	103916	170	51642	14280	9000	4693	470	10584

SESSIONAL PAPER No. 22

of Fish &c.—Nova Scotia—Continued.

OF FISH.														TOTAL VALUE OF ALL FISH.	Number.
Trout, lbs.	Shad, brls.	Smelts, lbs.	Alewives or Gaspereau, brls.	Bass, lbs.	Eel, brls	Clams, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
														\$ cts.	
1000	600	10	.....	20	30	.....	2000	20	50	310	450	40	6,594 00	1
150	300	12	.....	10	50	.....	2800	30	60	400	410	80	9,649 00	2
1000	1500	30	.....	15	42	.....	3000	30	75	450	750	160	16,167 00	3
3000	2	950	75	.....	12	30	.....	2500	10	35	80	375	110	10,571 00	4
280	350	4	.....	3	20	.....	1800	2	10	20	195	.....	1,248 00	5
450	...	3000	12	.....	6	.....	.....	1200	4	18	60	370	.....	2,119 00	6
2000	2	.....	3	50	.....	1500	5	25	30	200	.....	1,616 00	7
.....	5	.....	6	10	.....	3100	25	45	300	380	180	18,072 00	8
.....	3	.....	5	20	...	2000	20	20	210	200	78	7,229 00	9
1000	800	8	.....	10	15	.....	4000	8	25	125	300	.....	2,851 00	10
1800	1200	204	.....	145	270	.....	18000	470	250	5000	3000	720	126,177 00	11
950	50	4000	80	6	1000	.....	1650	300	22000	9000	1600	255,245 00	12
1300	5	.....	20	4	400	.....	1200	5000	1500	3260	360	65,269 00	13
1700	18000	468	.....	70	12	.....	.....	300	1000	1800	1000	150	85,942 00	14
14630	2	37300	888	4000	405	559	10400	41900	3774	6913	32285	19890	3478	.....
1463	20	1865	3552	400	4050	1118	520	2095	15096	13826	9685	29835	1739	608,749 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and Quantities of Fish—Nova Scotia—Con.

FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.														
Vessels.				Boats.		Gill Nets.		Seines.		Trap Nets.														
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Number.	
Halifax County.																								
1				120	1000	365	600	12000	1800	62	6200	1200			1000	50	50	3000	3500	600000	100			1
2	20	350	7	130	1250	210	550	11000	1800	23	2300	14000	12	2000	1200	150	125	4000	1000	500000	20	2880		2
3	62	1400	18	490	4500	300	4000	80000	1650	22	2200	1900	16	960	2000	150	700	5000	1000	400000	50			3
4	22	350	6	80	750	75	325	65000	1500	8	800	1200			1000	200	325	1000		330000	50			4
5	98	1750	26	230	2500	250	700	68500	6600	38	3800	9300			2000	500	700	1500	1000	500000	200			5
6	21	500	6	150	2000	200	300	16000	4000	80	8000	10000			1200		300	2000		20000	100			6
7	57	900	16	180	2000	275	300	9000	2200	22	2500	4000			500		400	4000		8000	50	15936		7
8	108	2000	32	10	200	20	200	6000	1000	10	1200	2000			300		300	200		1000	20			8
9	140	3500	40	45	800	90	350	9000	2500	4	500	1000			500		75	1000		4500	50	50112		9
10	40	900	10	60	900	90	300	8000	2000	12	1200	1500			400		65	1500		120000	20			10
11	26	700	5	40	600	75	350	9000	2500	18	1800	2000			700		30	3000		25000	10			11
12	195	3500	40	60	800	75	100	3000	800	25	2500	2500			400		25	1000		4000	12			12
13	31	400	10	30	500	50	60	1500	500	40	3000	3000			200		75	2000		2000	15			13
14	170	8000	50	25	500	40	4	80	28	10	1000	2000			400		25	2500	1000	1200				14
15	15	500	3	78	1222	61	231	13060	924						280		90	2100		1000	25			15
16				18	180	15	85	5100	300						210		21	800		325	2			16
17																								17
18	275	6250	80	132	1250	75	130	7800	400						215		58				2			17
19	84	2200	27	57	620	38	388	2328	1500								461				23			18
20				51	892	43	113	6775	452								121							19
21				60	1200	52	90	5100	345								35	500						20
22	98	1100	28	98	1635	75	120	7200	475	1	175	40			900		66	400						21
23							200	12000	750						210		258							22
24	88	1600	21	82	1439	65	316	18960	1200	2	265	400	1	135	265		626				47	26736		2
25	13	400	4	64	1180	64	108	6480	250						280		370				12	23010		24

RETURN Showing the Quantity and Value of Fish, &c.—Nova Scotia.—Continued.

Number.	DISTRICTS.	KINDS OF FISH.																			TOTAL VALUE OF ALL FISH.	Number.		
		Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked thinly haddies, lbs.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or Gaspe- reau, brls.	Eels, brls.	Clams, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.
Halifax County.																								
1	North Shore.....	1000	200	3	.....	400	.....	100	20	150	.....	300	.....	5	1	30	2000	1000	25	200	200	75	.....	1
2	East St. Margarets.....	1000	500	4	500	50	.....	1200	140	200	1000	500	.....	40	3	40	1000	12000	40	65	300	90	10	2
3	Indian Harbour.....	2000	1000	5	1000	400	.....	400	80	300	4000	100	.....	25	2	5	700	7000	40	30	2000	250	.....	3
4	Peggy's Cove.....	500	800	6	500	80	.....	300	50	90	1000	.....	.....	10	2	.....	4000	1200	12	25	800	85	.....	4
5	Dover.....	2000	1300	15	5000	750	.....	1000	1500	300	3000	50	.....	40	4	60	5400	8000	25	100	2000	250	.....	5
6	Prospect.....	500	1000	5	1000	100	.....	50	40	50	1000	100	.....	25	7	30	2500	2000	10	.....	700	100	.....	6
7	Terence Bay.....	400	1600	7	1000	80	.....	100	80	250	1000	50	1000	50	10	40	2000	300	50	.....	500	100	.....	7
8	Pennant.....	50	1300	5	1000	30	.....	200	160	500	1000	100	200	10	1	20	700	600	8	.....	1000	10	50	8
9	Sauble.....	60	4000	.....	1000	40	.....	50	40	7500	10000	.....	.....	3	.....	100	500	600	40	.....	1500	20	.....	9
10	Ketch Harbour.....	30	2500	3	1500	5	.....	.....	.....	1500	200	.....	.....	1	.....	15	300	300	50	.....	1000	20	.....	10
11	Portuguese Cove.....	15	75	1	5000	.....	.....	10	9	30	400	.....	.....	1	.....	25	500	1000	50	.....	300	10	170	11
12	Herring Cove.....	10	10000	6	100000	.....	.....	200	160	200	100000	.....	.....	2	.....	10	200	600	100	.....	1000	25	.....	12
13	Ferguson's Cove.....	10	600	3	20000	.....	.....	.....	.....	20	6000	.....	.....	1	.....	15	500	700	20	.....	80	10	.....	13
14	Halifax.....	150	1200	.....	40000	.....	500	.....	.....	100	50000	1000	.....	.....	25	.....	.....	600	20	.....	100	10	.....	14
15	Eastern Passage and Devil's Island.....	.....	550	1	20000	120	.....	.....	.....	180	7770	.....	.....	9	6	.....	6000	.....	.....	.....	485	50	.....	15
16	Cow Bay and Lawrencetown.....	.....	95	.....	1500	18	.....	.....	.....	65	500	400	4000	10	3	100	3500	.....	.....	.....	97	12	.....	16
17	Seaforth and Three Fathom Harbour.....	110	88	.....	1000	21	.....	.....	.....	28	450	150	7500	25	4	.....	5500	.....	.....	.....	57	8	.....	17
18	West Chezetcook.....	140	4198	2	.....	420	.....	.....	.....	115	4000	60	4000	7	3	200	5000	.....	.....	.....	2410	300	.....	18
19	East Chezetcook.....	150	1410	.....	.....	170	.....	.....	.....	107	1900	525	1750	7	7	.....	5000	.....	.....	.....	770	118	.....	19
20	Petpeswich Harbour.....	225	438	.....	3600	57	.....	.....	.....	233	1400	750	300	4	7	.....	4500	.....	.....	.....	357	50	70	20
21	Musquodoboit Harbour.....	275	760	.....	8750	80	.....	.....	.....	148	3000	1800	6500	1	10	.....	4500	.....	.....	.....	456	50	.....	21
22	Jeddore.....	300	2360	1	23000	147	.....	70	124	362	4400	180	1500	5	10	100	900	.....	.....	.....	1300	209	60	22
23	Clam Harbour and Owl's Head.....	270	815	.....	23500	57	.....	7	12	47	2670	750	1500	3	2	.....	9000	.....	.....	.....	525	55	90	23
24	Ship Harbour, Pleasant Har- bour and Tangier.....	60	659	.....	.....	55	.....	3	4	40	120	600	750	6	3	.....	7000	.....	.....	.....	377	35	80	24

SESSIONAL PAPER No. 22

25	Pope's Harbour and Gerard's Island.....	537	.....	9	.....	.....	.....	8	2100	500	700	.....	.....	27	.....	.....	5	.....	455	12	100	11,080	25
26	Spry Bay, Taylor's Head and Mushaboon.....	995	.....	30	.....	108	100	35	1755	200	.....	.....	.....	39	.....	.....	14	.....	703	14	200	24,036	26
27	Sheet Harbour & Sober Island	620	.....	26	.....	.....	.....	32	5000	500	.....	.....	.....	30	5	.....	4	.....	500	15	110	25,448	27
28	Beaver Harbour, Port Dufferin.....	126	.....	3	.....	.....	.....	14	600	.....	.....	.....	.....	5	.....	.....	1	.....	100	2	190	13,799	28
29	Quoddy and Harrigan Cove.	119	.....	.....	.....	.....	.....	3	.....	300	.....	.....	.....	2	.....	.....	.....	.....	100	5	220	17,663	29
30	Moser River and Smith's Cove.....	80	.....	.....	.....	.....	.....	.....	.....	200	.....	.....	.....	2	8	.....	.....	.....	50	2	.....	442	30
31	Mitchell's Bay and Feum Secum.....	330	.....	17	.....	.....	.....	5	1530	100	.....	.....	.....	6	4	.....	2	.....	286	8	300	15,218	31
	Totals.....	13073	39746	67	258850	3165	500	3798	2519	12612	215795	9215	29700	290	102	926	79300	35900	516	420	20508	1991	1650
	Values \$	65365	158984	670	7765	9495	30	8545	1260	25224	21579	921	1485	1160	1020	1852	3965	1795	2064	840	6152	2986	825	732,672

RECAPITULATION

Of the Yield and Value of the Fisheries in District No 2, Nova Scotia with Comparative Statements of the Increase or Decrease for the Years 1898 and 1899.

Kinds.		Quantity in 1899.	Rate.	Totals.	QUANTITIES.	
					Increase.	Decrease.
			\$ cts.	\$		
Salmon, fresh.....	Lbs.	210,938	0 20	42,187	9,839	.....
" preserved in cans.....	"	4,000	0 15	600	1,380	.....
" smoked.....	"	5,050	0 20	1,010	925	.....
Herring, salted.....	Brls.	18,872	4 00	75,488	.....	1,830
" fresh.....	Lbs.	1,276,600	0 01	12,766	302,997	.....
" smoked.....	"	15,700	0 02	314	7,400	.....
Mackerel, fresh.....	"	2,774,759	0 12	332,971	1,227,581	.....
" salted.....	Brls.	2,310	15 00	34,650	218	.....
Lobsters, preserved in cans.....	Lbs.	2,358,920	0 20	471,784	.....	243,804
" fresh, in shell.....	Cwt.	15,765	5 00	78,825	.....	3,133
Cod, dried.....	"	68,289	4 00	273,156	25,713	.....
" tongues and sounds.....	Brls.	86	10 00	860	56	.....
Haddock, fresh.....	Lbs.	1,982,150	0 03	59,464	142,318	.....
" dried.....	Cwt.	8,697	3 00	26,091	.....	107
" smoked finnan haddies.....	Lbs.	150,500	0 06	9,030	.....	9,780
Hake, dried.....	Cwt.	9,286	2 25	20,893	1,353	.....
" sounds.....	Lbs.	9,257	0 50	4,630	23	.....
Pollock.....	Cwt.	18,055	2 00	36,110	12,518	.....
Halibut.....	Lbs.	569,470	0 10	56,947	158,341	.....
Trout.....	"	47,605	0 10	4,760	8,120	.....
Shad.....	Brls.	3,208	10 00	32,080	431	.....
Smelts.....	Lbs.	217,250	0 05	10,862	33,890	.....
Alewives or gaspereaux.....	Brls.	2,682	4 00	10,728	.....	533
Bass.....	Lbs.	10,850	0 10	1,085	.....	3,910
Eels.....	Brls.	727	10 00	7,270	.....	112
Clams, in shell.....	"	2,045	2 00	4,090	404	.....
Oysters.....	"	1,677	4 00	6,708	.....	108
Tom cod or frost fish.....	Lbs.	79,400	0 05	3,970	20,660	.....
Flounders.....	"	140,210	0 05	7,010	.....	.....
Squid.....	Brls.	4,327	4 00	17,308	1,014	.....
Coarse and mixed fish.....	"	7,403	2 00	14,806	6,466	.....
Fish oil.....	Galls.	54,611	0 30	16,383	8,755	.....
Fish used as bait.....	Brls.	28,039	1 50	42,059	508	.....
" manure.....	"	9,689	0 50	4,845	.....	4,084
Totals.....				1,721,740		

SESSIONAL PAPER No. 22

RECAPITULATION

SHOWING the Number and Value of Fishing Vessels, Boats, etc., in the District No. 2, Province of Nova Scotia for the year 1899.

Material.	Value.	Total.
	\$	\$
100 ves-s-els (2,462 tons).....	57,873	
5,784 boats.....	99,814	
28,784 gill-nets (796,527 fathoms).....	137,365	
430 seines (42,095 fathoms).....	51,895	
82 trap-nets.....	18,220	
2,772 trawls.....	12,744	
49 weirs..	6,880	
150 smelt nets.....	2,303	
9,662 hand lines.....	4,760	
		391,854
120 lobster canneries (1,730 hands).....	117,075	
290,630 lobster traps.....	153,450	
		270,525
58 freezers and ice houses.....	21,192	
1,790 smoke and fish houses.....	54,179	
848 wharfs and piers.....	42,924	
39 tugs, steamers, smacks.....	30,685	
		148,980
Total value.....		811,359

COMPARATIVE STATEMENT of the Value of the Fisheries in each County of District No. 2, Nova Scotia, for the years 1898 and 1899.

County.	Value in 1898.	Value in 1899.	Increase.	Decrease.
	\$	\$	\$	\$
Antigonish..	66,412	83,161	16,749	
Colchester.....	33,145	50,975	17,830	
Cumberland.....	137,413	128,149		9,264
Guysborough.....	594,887	608,749	13,862	
Halifax.....	504,893	732,678	227,779	
Hants.....	13,602	12,916		686
Pictou.....	105,919	105,112		807
Totals.....	1,456,271	1,721,740	276,220	10,757
			10,757	
Net increase....			265,463	

NOVA SCOTIA,

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets,
Nova Scotia

Number.	Name.	FISHING VESSELS AND BOATS.						FISHING MATERIALS.												
		Vessels.				Boats.		Gill Nets.			Trawls.		Weirs.	Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.						Number.	Value.
	Annapolis County.			\$		\$					\$	\$								
1	Margaretville	2	54	500	8	6	100	12	15	800	300	.....	.....	2	400	3000	300	.....	.....
2	Port George.....	.....	.....	.....	.....	15	275	17	20	1000	400	16	75	2	400	2000	400	.....	5000
3	Port Lorne.....	4	52	800	16	10	200	20	25	2000	800	15	70	..	.....	.....	600	.....	.....
4	Hampton. ....	.....	.....	.....	..	16	300	22	24	1800	750	16	75	..	.....	.....	400	.....	.....
5	Phinny & Young's Cove .....	.....	.....	.....	.....	20	400	20	25	1800	790	18	100	..	.....	.....	300	.....	.....
6	Parker's Cove.....	2	44	700	12	25	500	40	30	2000	850	30	150	..	.....	.....	250	.....	.....
7	Hilsburn's & Delap's Cove.....	2	26	500	10	18	400	25	40	2500	875	40	200	..	.....	.....	150	.....	.....
8	Victoria Beach.....	1	48	1000	14	30	600	50	50	3000	1200	75	400	..	.....	.....	60	.....	.....
9	Thorne Cove.....	1	65	1000	13	10	200	10	12	480	200	50	250	2	400	.....	.....	.....	.....
10	Annapolis to county line.....	.....	.....	.....	.....	.....	.....	.....	10	400	150	.....	.....	3	200	200	.....	.....	.....
11	Clementsport	1	17	300	5	8	200	10	12	600	250	30	175	5	800	.....	80	2500	2000
12	Lequille River.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	50	350	.....	.....	.....
13	Round Hill River..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	200	.....	.....	.....
14	Inland Lakes .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	13	306	4800	78	158	3175	226	263	16380	6565	290	1495	15	2250	5750	2540	2500	2000	
	Values .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1150	10160	25	40

SESSIONAL PAPER No. 22

District No. 3.

&c., and the Quantity and Value of Fish caught in District No. 3, Province of for the Year, 1899.

KINDS OF FISH.																	FISH PRODUCTS.			TOTAL VALUE.		Number.
Mackerel, salted, brls.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, tongues & sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked Finnan Haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Trout, lbs.	Alewives or gasp'x, brls.	Bass, lbs.	Eels, brls.	Flounders, lbs.	Tom cod (frost fish) lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.			
40	...	400	2	2000	150	....	100	100	150	...	...	...	...	...	...	...	150	25	100	\$ 5,237	50	1
...	90	300	1	1500	175	....	500	250	100	...	...	...	...	...	...	...	300	50	100	6,495	00	2
...	150	550	3	3000	200	....	300	175	90	...	...	...	...	...	...	...	175	60	80	7,195	00	3
...	200	400	3	2500	400	....	425	200	150	...	...	...	...	...	...	...	200	60	30	7,026	25	4
...	225	300	2	1000	700	....	800	400	200	...	...	...	...	...	...	...	275	75	25	8,282	50	5
...	300	375	3	1500	1300	....	1500	700	300	...	...	...	...	...	...	...	450	60	30	12,540	00	6
...	250	200	2	1000	700	....	1000	400	350	...	...	...	...	...	...	...	300	50	...	8,115	00	7
...	200	3000	7	1000	3500	....	6000	3000	2800	...	...	...	...	...	...	...	900	125	60	45,017	50	8
...	100	100	1	3000	3000	....	3500	1500	2000	...	...	...	...	...	...	...	500	30	25	22,832	50	9
...	...	...	...	...	...	...	...	...	...	600	100	500	...	500	800	2000	...	...	...	4,615	00	10
...	...	300	1	800	500	...	400	200	100	...	...	...	...	...	...	...	150	100	60	4,544	00	11
...	...	...	...	...	...	...	...	...	...	200	...	100	2	...	...	...	...	...	...	120	00	12
...	...	...	...	...	...	...	...	...	...	300	...	100	2	...	...	...	...	...	...	100	00	13
...	...	...	...	...	...	...	...	...	...	8000	...	...	...	...	...	...	...	...	...	800	00	14
40	1515	5925	25	20300	10625	9600	14525	6925	6240	9100	100	700	4	500	800	2000	3400	635	510	.....	
600	7575	23700	250	609	31875	576	32681	3462	12480	910	400	70	40	25	40	4000	1020	952	255	133,496	25	

SESSIONAL PAPER No. 22

27 Church Point.....	1	31	1225	8	11	275	18	6	180	42	.....	.....	.....	.....	.....	.....	.....	94	.....	.....	.....	.....	.....	60	430	.....	27
28 Little Brook.....	.....	.....	.....	.....	2	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	.....	.....	.....	28
29 Saulnierville.....	.....	.....	.....	.....	13	325	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	203	.....	.....	.....	.....	84	43	.....	.....	29
30 Meteghan River.....	.....	.....	.....	.....	3	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39	.....	.....	.....	30
31 Meteghan.....	2	26	850	13	13	325	18	5	150	35	.....	.....	.....	.....	.....	.....	.....	207	.....	15264	.....	.....	284	581	.....	.....	31
32 Bear Cove.....	.....	.....	.....	.....	4	100	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	335	.....	.....	.....	75	75	.....	.....	.....	32
33 Cape Cove.....	1	16	575	6	8	200	17	28	840	196	.....	.....	.....	.....	.....	.....	.....	175	.....	.....	.....	126	317	.....	.....	.....	33
34 Salmon River.....	.....	.....	.....	.....	1	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	34
35 Comeauville.....	.....	.....	.....	.....	26	650	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	96	.....	.....	.....	67	499	.....	.....	.....	35
36 Grosses Coques.....	.....	.....	.....	.....	9	225	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	132	.....	.....	.....	.....	.....	83	.....	.....	36
Totals.....	57	1819	43650	532	467	20095	880	634	17465	3089	393195	5985	3	1800	26	2775	1470	3047	1087151	66100	65300	27408	20794	33697	1151	.....	.....
Values ... \$	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	294	12188	10871	1322	7836	5481	103970	134788	1155	.....	.....

Return showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.								
	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked thin man haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Alwives or garaspereau, brls.	Bass, lbs.	Eels, brls.			Clams, brls.	Flounders, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	
<i>Digby County.</i>																						\$	cts.
1 Digby.....	32268	12000	895370	12500	13000	1825	299225	1500	7	3000	600	300	5	...	5000	80	10000	8400	2250	4500	242,125	25	1
2 Bay View.....	5400	8200	...	340	600	55	1050	...	...	...	...	...	...	...	400	...	250	356	440	300	30,068	80	2
3 Culloden.....	3500	265	...	425	800	90	1000	...	...	...	...	...	...	...	75	...	550	500	120	250	5,245	00	3
4 Roseway.....	350	200	...	340	600	60	250	...	8	...	10	...	10	35	...	...	100	150	300	350	4,728	50	4
5 Gulliver's Cove ..	10000	4922	4000	4335	2000	457	5110	50	...	...	...	...	...	4	300	...	500	650	250	1000	64,609	75	5
6 Centreville.....	350000	650	200000	2000	2000	140	1500	...	...	...	...	...	...	...	450	...	700	7500	300	4000	52,188	50	6
7 Sandy Cove.....	1000	40	3500	200	150	30	500	...	...	500	...	...	...	20	1500	...	70	150	40	100	3,246	40	7
8 Mink Cove.....	50000	200	4000	600	500	100	1000	8	...	...	...	...	...	4	1000	...	1000	500	200	1000	11,684	40	8
9 Little River.....	160000	2000	20000	2200	3200	400	1000	50	...	...	...	...	...	8	1500	...	2000	3500	1000	5000	36,390	00	9
10 White Cove.....	20000	130	...	250	200	40	300	...	...	...	...	...	...	...	200	...	40	400	50	60	2,328	50	10
11 Whale Cove.....	70000	1000	...	1000	2000	6000	1000	10	...	...	...	...	...	...	600	...	500	2000	200	4000	27,001	00	11
12 Long Beach.....	9000	400	...	400	400	200	500	25	...	...	...	...	...	...	800	...	40	350	40	70	5,792	50	12
13 East Ferry.....	35000	650	...	1000	450	100	1000	...	...	...	...	...	...	...	500	...	200	1500	200	300	9,970	00	13
14 Tiverton	200000	4400	...	9000	3200	460	35000	20	...	...	...	...	...	...	1000	...	12000	5000	3000	5000	95,632	80	14
15 Central Grove.....	800	600	...	550	600	200	400	4	...	...	...	...	...	...	100	...	200	800	150	350	7,262	90	15
16 Free Port	140000	12000	...	30000	2500	800	50000	...	...	...	...	...	...	...	500	...	3000	11000	3000	3500	172,415	00	16
17 Westport.....	120000	7500	...	100000	2500	4000	80000	...	...	...	...	...	...	...	5500	...	3400	15000	4000	5000	331,595	00	17
18 Smith's Cove	10000	90	...	70	200	112	550	...	...	...	25	...	...	30	700	...	400	200	5000	30000	32,556	50	18
19 Brighton.....	3000	10	...	...	...	20	...	...	...	...	50	...	40	30	800	...	150	200	400	500	7,164	00	19
20 Plympton.....	8000	20	...	...	...	5	...	...	...	...	50	10	20	10	300	...	15	100	100	200	3,944	00	20
21 Doty's Landing.....	10000	10	...	...	...	15	...	...	4	...	...	...	5	5	100	...	20	120	200	350	1,586	00	21
22 Weymouth.....	2000	10	...	...	...	...	...	600	...	20000	...	...	6	20	200	...	10	100	60	100	2,542	00	22
23 New Edinburgh.....	50000	4000	...	...	...	20000	...	...	...	1000	...	...	10	100	800	...	25	400	100	300	56,780	00	23
24 Waterford	1000	200	...	280	200	35	...	...	10	...	5	...	...	...	200	...	200	300	1000	1500	8,170	00	24
25 New Edinburgh.....	...	119	...	8	...	57	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,928	00	25
26 Belliveau Cove.....	...	139	...	13	...	83	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2,159	25	26

SESSIONAL PAPER No. 22

etc., and the Quantity and Value of all Fish, &c.—Nova Scotia—Continued.

KINDS OF FISH.													FISH PRODUCTS.			TOTAL VALUE.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, brls.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Alewives or gasperreaux, brls	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	.....	.....	.....	\$ cts.	
500	.....	.....	.....	.....	.....	.....	.....	.....	.....	500	.....	300	.....	.....	.....	2,010 00	1
400	.....	.....	.....	.....	.....	.....	.....	.....	.....	300	.....	60	.....	.....	.....	1,350 00	2
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75	.....	.....	.....	30	350 00	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	80	.....	.....	.....	40	765 00	4
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	820 00	5
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
.....	.....	3000	9000	.....	.....	.....	.....	.....	400	.....	.....	.....	.....	.....	.....	275 00	7
20000	100	.....	.....	.....	150	180	75	225	500	.....	.....	.....	.....	150	100	6,483 75	8
10000	150	.....	6000	4	75	80	.....	20	.....	.....	.....	.....	75	100	60	3,562 50	9
5000	75	.....	10000	.....	40	30	.....	35	.....	.....	.....	.....	.....	20	30	1,865 00	10
6000	60	.....	.....	.....	50	40	20	30	.....	.....	.....	.....	.....	50	45	1,962 50	11
7500	175	.....	75000	.....	80	24	35	56	.....	.....	.....	.....	.....	80	90	4,447 75	12
4500	190	.....	210000	.....	50	32	15	40	.....	.....	.....	.....	.....	40	75	6,367 25	13
8000	200	.....	.....	.....	36	9	.....	30	.....	.....	.....	.....	.....	30	45	2,698 50	14
.....	190	.....	160000	.....	60	20	.....	25	.....	.....	100	.....	.....	50	75	5,422 50	15
61950	1140	3000	470000	4	541	415	145	461	900	800	255	860	75	520	640	.....
12390	4560	30	9400	60	2164	1245	326	922	90	80	2550	3440	22	780	320	38,379 75	

Return showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c —Nova Scotia—Continued.

DISTRICTS.		FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.										
		VESSELS.			BOATS.			GILL NETS.			SEINES.			Trap Nets.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.										Value.	
Lunenburg County.																								
1	Lunenburg, Upper and Lower South Rose Bay, Kingsburg, Black and Blue Rocks, Back Harbour to Cross Island....																							
2	LaHave, Eastside, Ritey's Cove, Ironbound Island, LaHave, Middle, West to New Dublin.																							
3	Petite Riviere, Broad and Vogler's Cove to county line... ..																							
4	Chester																							
5	Mahone Bay and Martin's River.																							
6	Fox Point....																							
7	Mill Cove																							
8	The Lodge.....																							
9	North-west Cove.....																							
10	Aspotogan																							
11	Bayswater.																							
12	Islandford																							
13	Little-Tancoek....																							
14	Big Tancoek....																							
15	Deep Cove.																							
Totals		169	13845	596680	2650	2434	64965	1494	16125	322500	98360	218	21530	36825	132	22680	14600	752	23520	701	129448	704		
Values																	2920	150	19228	2187	2822	10515	25889	3520

RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.																	TOTAL VALUE.	Number.	
		Cod, dried, cwt.	Cod, tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake, sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gasper- reaux, brls.	Clams, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
1	Lunenburg County.																				
1	Lunenburg, Upper and Lower South Rose Bay, Kingsburg, Black and Blue Rocks, Back Har- bour to Cross Island....	117295	45	6285	170	140	48100	500	200	300	100	87972	15	530,299	40	1					
2	LaHave, Eastside, Ritcey's Cove, Ironbound Island, LaHave, Middle, West to New Dublin.....	100507	40	257	.....	52	15090	7500	300	700	400	75380	18	436,729	20	2					
3	Petite Rivière, Broad and Volger's Coves to Coun- ty line.....	13800	5	8	.....	3	300	100	150	400	.....	10350	10	62,536	50	3					
4	Chester	1500	10	50	70	25	1000	7000	50000	1400	260	360	400	25,922	50	4					
5	Mahone Bay and Martin's River.....	60000	90	30000	360	90	36000	2600	8000	700	100	15200	1000	255,273	00	5					
6	Fox Point.....	500	50	100	200	200	300	200	70000	200	1600	350	500	15,582	50	6					
7	Mill Cove.....	2000	500	160	400	100	70	100	70000	200	110	200	400	24,367	00	7					
8	The Lodge.....	200	300	30	40	15	15	10	2000	200	10	40	60	2,105	00	8					
9	North-west Cove.....	40	40	20	60	15	15	10	2600	200	10	30	60	1,874	00	9					
10	Aspotogan.....	20	20	6	15	40	15	10	1200	200	70	15	70	8,825	25	10					
11	Bayswater.....	16	16	5	15	60	15	10	1600	200	60	12	50	936	60	11					
12	Blandford.....	300	300	200	100	60	400	40000	40000	200	20	400	300	6,766	00	12					
13	Little Tancook	600	600	300	100	40	100	4000	4000	200	60	250	60	7,000	00	13					
14	Big Tancook	1500	6	400	100	70	200	30000	30000	200	800	600	600	24,671	00	14					
15	Deep Cove.....	12	2	8	10	6	10	2500	2500	200	12	12	20	903	50	15					
	Totals.....	298290	698	93550	7846	1525	490	856	102190	1500	17700	175	68	166	282550	4100	562	5395	191171	3563	652
	Values	1193160	6980	2806	23538	3431	245	1712	10219	150	885	700	680	1660	14128	205	2248	10790	57351	5355	326
																					1,403,791 45

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and Quantities of Fish—Nova Scotia—Con.

Number.	DISTRICTS.											FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.								
	DISTRICTS.											Vessels.			Boats.			Gill Nets.			Seines.			Salmon, fresh, lbs.			Salmon, smoked, lbs.			Herring, salted, brls.		
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Salmon, fresh, lbs.	Salmon, smoked, lbs.	Herring, salted, brls.											
1	4	173 ¹⁶ / ₁₀₀	7900	32	74	1538	57	293	5274	2344	5	500	1000	1850	180																	
2	...	...	...	...	45	1283	55	300	5400	2400	2	250	500	...	79													
3	2	25 ⁸ / ₁₀₀	1000	9	69	1573	71	196	3528	1568	...	...	...	...	235													
4	1	16 ³ / ₁₀₀	600	4	85	1920	93	268	4824	2144	...	...	...	...	710													
5	1	13 ¹⁵ / ₁₀₀	400	4	35	882	42	80	1440	640	...	...	...	...	218													
6	...	...	...	...	25	575	30	67	1200	536	...	...	...	...	52									
7	...	...	...	...	22	506	27	70	1360	560	...	...	...	...	46									
8	1	92 ⁹⁰ / ₁₀₀	4000	19	60	1272	48	150	2700	1200	...	...	...	...	16													
9	8	96	...	*10	...	10	9																
10	20	240	...	32	460	192	10																
11	7	84	...	*40	...	40	11																
Totals.....		9	320	13900	68	450	9969	423	1506	26186	11634	7	750	1500	16580	450	1536												
Values.....		3316	90	6144												

* Dip nets.

Return showing the Quantity and Value of Fish, &c.—Nova Scotia—Continued.

SESSIONAL PAPER No. 22

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH. \$ cts.	Number.	
		Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Haddock, dried, cwt.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Fish oil, galls.			Fish as bait, brls.
1	Queens County.	10	.....	.....	3075	38	10	116	.....	.....	.....	10	.....	1210	80	14,431 50	1
2		38	.....	.....	714	55	.....	40	1000	.....	.....	.....	.....	360	.....	4,195 00	2
3		23	21888	.....	1300	103	12	30	2800	.....	.....	.....	.....	310	.....	11,631 60	3
4		16	61056	2700	1400	43	10	13	3000	.....	.....	.....	.....	370	.....	34,979 70	4
5		.....	6240	.....	593	46	.....	8	400	.....	600	15	25	120	.....	5,062 00	5
6		.....	57696	557	197	9	.....	5	.....	.....	.....	.....	.....	60	.....	15,375 20	6
7		.....	.....	.....	198	9	.....	16	.....	.....	.....	.....	.....	70	.....	1,094 00	7
8		2	.....	.....	2063	60	10	29	1500	.....	.....	80	.....	1025	80	10,354 00	8
9		.....	.....	.....	.....	.....	.....	.....	.....	5000	.....	25	.....	.....	.....	1,516 00	9
10		.....	.....	.....	.....	.....	.....	.....	.....	500	.....	250	.....	.....	.....	2,070 00	10
11		.....	.....	.....	.....	.....	.....	.....	.....	1600	.....	300	2	.....	.....	1,592 00	11
Totals.		89	146880	3257	9540	363	42	257	8700	7100	600	680	27	3525	160	.....
Values		\$ 1335	29376	16285	38160	1089	94	514	870	710	30	2720	270	1058	240	102,301 00	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.				FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.									
	Vessels.				Boats.				Gill Nets.				Trap Nets.				Herring, salted, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.										
Shelburne County.																						
1	North-east Harbour, North-west Harbour and Port Saxon.....	4	82	2375	37	20	1200	35	200	6000	1000	.....	.....	400	100	200	.....	.....	800	1
2	Black Point, Red Head and Round Bay.....	3	65	2000	18	55	3175	125	100	2000	3200	.....	.....	.....	400	.....	35	.....	725	2
3	Roseway and McNutt's Island.....	.....	.....	.....	.....	55	3500	120	800	16000	2600	.....	.....	.....	380	.....	25	.....	525	3
4	Gunning Cove, Churchover and Birchtown.....	2	25	500	10	50	1800	100	415	8300	1385	.....	.....	150	685	200	2	.....	425	4
5	Shelburne and Sandy Point.....	7	494	19200	105	55	1450	110	970	19500	3300	.....	.....	460	485	825	7	756	250	5
6	Jordan.....	1	100	5000	21	48	1480	70	625	12500	2100	.....	.....	700	685	475	.....	.....	200	6
7	Lockeport.....	15	776	3100	160	160	2500	325	1275	25500	4500	.....	.....	300	1200	1200	5	38532	1004	7
8	Barrington.....	2	60	3000	18	60	1800	66	700	14000	1300	.....	.....	200	150	.....	.....	.....	1500	8
9	Wood's Harbour.....	5	120	4000	45	160	5000	175	1000	20000	1900	1	2000	.....	1000	16000	.....	74208	12000	9
10	Shag Harbour.....	3	52	1350	26	85	3000	85	900	18000	1400	.....	.....	.....	600	1100	.....	20736	1600	10
11	Bear Point.....	1	20	500	6	25	700	30	55	1100	1000	.....	.....	.....	100	.....	.....	.....	650	11
12	Cape Island.....	6	180	5000	60	600	1500	800	4000	80000	9000	6	11000	.....	4000	6000	.....	103508	15000	12
13	Port La Tour and Baccaro.....	2	120	4000	20	300	5600	175	2750	55000	8000	.....	.....	.....	3000	.....	.....	.....	3000	13
14	Upper Port La Tour.....	3	50	1500	40	40	600	50	775	15500	700	.....	.....	.....	500	.....	.....	.....	1200	14
15	Capes Negro and Blanche.....	3	50	1000	20	85	1200	90	700	14000	1100	.....	.....	.....	200	600	.....	26832	6000	15
16	Cape Negro Island.....	.....	.....	.....	.....	65	1500	65	830	16600	1250	1	1500	.....	150	600	.....	.....	4000	16
17	Port Clyde.....	.....	.....	.....	.....	6	600	6	30	600	30	.....	.....	2000	50	.....	.....	30288	.....	17
Totals.....		57	2194	80425	586	1869	36005	2427	16125	324600	43765	8	14500	4210	13685	27200	74	291860	48879			
Values.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	842	54740	3264	1110	58972	244395	

RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													Total Value of All Fish.	Number.	
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Smoked finnan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereaux, brls.	Eels, brls.	Torn cod or frost fish, lbs.			Coarse and mixed fish, brls.
Shelburne County.																	
1	North-east Harbour, North-west Harbour and Port Saxon	1225	2	1000	110	10	55	300	300	400	500	20	2	250	180	37	10168 50
2	Black Point, Red Head and Round Bay	1400	2	1200	250		49	1000	1000	400	500	450	10	500	850	200	14899 00
3	Roseway and McNutt's Island	525	1	800	430		200	300	300	150		35	10	700	225	75	8839 00
4	Gunning Cove, Churchover and Birchtown	850	1	1200	340		225	450	225	225	75	30	6	550	275	75	10338 75
5	Shelburne and Sandy Point	12625	7	2500	245		125	870	6500	6500	500	75	8	600	5075	675	58974 20
6	Jordan	2975	3	800	240	250	30		1500	1500	2000	7	8	1500	1400	145	17756 50
7	Lockeport	25200	14	3000	1000	15000	7	360	3000	600		3	10	400	10660	1972	130165 15
8	Barrington	4000			1000		100	300	300			400	20	400	300	2500	33030 00
9	Wood's Harbour	1600			400		100	700	700						200	6090	97691 60
10	Shag Harbour	1200			500		400	80	80			30			350	650	23059 20
11	Bear Point	300			100		75	500	500						75	550	6197 50
12	Cape Island	12000			6000		1500	120000							3000	9000	207821 60
13	Port La Tour and Baccaro	6000			1000		3000	2000	2000			140	30		2500	1400	63910 00
14	Upper Port La Tour	1500			400		900	1200	1200						150	500	17915 00
15	Capes Negro and Blanche	800			600		250	800	800						125	400	42455 90
16	Cape Negro Island	700			400		300	2000	2000						800	900	27062 00
17	Port Clyde	50										200				500	8407 60
Totals		72950	29½	10500	13015	15250	17	7669	134220	9375	3075	1390	104	4900	26165	25579	
Values		\$ 291800	295	315	39045	915	38	15338	13422	937	154	5560	1040	245	7849	38369	778691 50

RETURN showing the Kinds, Quantities and Value of Fish, &c.—Nova Scotia—Continued.

Number.	DISTRICTS.	KINDS OF FISH.																TOTAL VALUE OF ALL FISH.	Number.			
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Eels, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, lbs.	Coarse and mixed fish, brls.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.
1	Yarmouth.....	19000	...	55000	4000	35000	600	15500	10000	3000	2000	...	...	2000	...	35	100	4000	270	300	201,307 00	1
2	Port Maitland.	9682	4	72550	...	15000	55	1710	3500	...	...	...	...	...	...	15	1250	1650	100	550	74,718 25	2
3	Sandford	1422	...	2100	...	...	...	170	2200	...	2500	...	...	...	15	15	800	100	...	275	56,052 25	3
4	Arcadia.	850	...	...	150	...	...	10	200	...	2100	...	65	...	...	...	...	...	150	...	12,592 00	4
5	Pubnico.	12309	4	...	1468	...	25	1175	4500	...	6000	...	...	...	7500	150	50	2300	300	...	132,507 25	5
6	Tusket Wedge. . .	7300	...	...	600	...	120	475	...	6000	...	...	...	...	100	75	650	1050	350	...	92,039 00	6
7	Tusket .....	...	...	...	...	...	...	...	...	...	...	1250	40	...	65000	...	...	...	450	...	11,307 00	7
8	Eel Brook.....	...	...	...	...	...	...	...	...	...	...	800	30	...	...	...	...	...	100	...	3,650 00	8
9	Salmon River.....	...	...	...	...	...	...	...	...	...	...	450	25	...	...	...	...	...	110	...	2,335 00	9
10	Argyle	250	...	...	75	...	...	12	...	...	...	50	15	...	1500	...	...	...	250	...	36,067 00	10
Totals		50813	8	129650	6293	50000	800	19052	20400	9000	12600	2550	175	2000	74115	290	2850	9100	2080	1125	....
Values.....\$		203252	80	3889	18879	3000	1800	38104	2040	900	630	10200	1750	100	3705	1160	5700	2730	3120	562	622,574 75	

RECAPITULATION.

OF the Yield and Value of the Fisheries in District No. 3, Province of Nova Scotia, for the Year 1899.

Kinds of Fish.	Quantity.	Rate.	Value.	Total.
		\$ cts.	\$ cts.	\$ cts.
Salmon, fresh..... Lbs.	111,845	0 20	22,369 00	
" smoked..... "	1,202	0 20	240 40	
				22,609 40
Herring, salted.... Brls.	32,105	4 00	128,420 00	
" fresh..... Lbs.	1,370,351	0 01	13,703 51	
" smoked..... "	539,850	0 02	10,797 00	
				152,920 51
Mackerel, fresh..... "	776,770	0 12	93,212 40	
" salted..... Brls.	918	15 00	13,770 00	
				106,982 40
Lobsters, canned..... Lbs.	1,274,596	0 20	254,919 20	
" fresh in shell..... Cwt.	91,839	5 00	459,195 00	
				714,114 20
Cod, dried..... "	471,756	4 00	1,887,024 00	
" tongues and sounds..... Brls.	876	10 00	8,760 00	
				1,895,784 00
Haddock, dried.... Cwt.	99,488	3 00	298,464 00	
" fresh..... Lbs.	1,552,518	0 03	46,575 54	
" smoked finnan haddies..... "	1,201,720	0 06	72,103 20	
				417,142 74
Hake..... Cwt.	182,602	2 25	410,854 50	
" sounds..... Lbs.	42,515	0 50	21,257 50	
				432,112 00
Pollock..... Cwt.	70,391	2 00		140,782 00
Halibut..... Lbs.	750,507	0 10		75,050 70
Trout..... "	39,142	0 10		3,914 20
Shad..... Brls.	414	10 00		4,140 00
Eels..... "	572	10 00		5,720 00
Smelts..... Lbs.	69,475	0 05		3,473 75
Alewives..... Brls.	6,445	4 00		25,780 00
Bass..... Lbs.	1,010	0 10		101 00
Clams..... Brls.	409	10 00		4,090 00
Flounders..... Lbs.	307,575	0 05		15,378 75
Tom cod..... "	83,915	0 05		4,195 75
Squid..... Brls.	1,092	4 00		4,368 00
Coarse and mixed fish..... "	45,638	2 00		91,276 00
Fish oil.....	292,612	0 30		87,783 60
Fish as bait..... Brls.	54,937	1 50		82,405 50
" as manure..... "	70,657	0 50		35,328 50
Total for 1899..				4,325,453 00
" 1898.....				4,708,524 55
Decrease.....				383,077 55

SESSIONAL PAPER No. 22

RECAPITULATION.

Of the Value of Fishing Vessels, Nets, &c., in District No. 3, Nova Scotia, for the Year 1899.

Material.	Value.	Total.
	\$	\$
351 fishing vessels (20,503 tons).....	805,125	
6,330 " boats.....	158,345	
819,401 fathoms of gill-nets.....	183,886	
265 seines (27,075) fathoms.....	44,810	
188 trap-nets.....	65,770	
82 weirs.....	14,115	
23 smelt-nets.....	912	
2,898 trawls.....	60,738	
11,150 hand lines.....	15,278	
		1,348,979
53 lobster canneries.....	51,250	
181,605 " traps.....	122,352	
		173,602
122 freezers and ice houses.....	12,995	
1,349 smoke and fish houses.....	75,355	
463 piers and fishing wharfs.....	98,075	
55 tugs or smacks (fishing).....	34,175	
2 fish canneries.....	1,500	
		222,100
Total.....		1,744,681

Number of fishermen employed in the same district.

Men in fishing vessels.....	4,449
" " boats.....	6,561
Persons in lobster canneries.....	2,259
Total.....	13,269

RECAPITULATION

Showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, &c., used in the whole Province of Nova Scotia for the Year 1899.

FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.																			
Vessels.					Boats.					Gill Nets.					Seines.					Trap Nets.					Trawls.				
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.						
		\$			\$				\$			\$			\$		\$		\$		\$		\$						
1 Cape Breton..	22	375	7850	124	578	1145	3297	75245	28258	1	80	750	448	2984	1	448	2984	448	2984	448	2984	448	2984						
2 Inverness	30	506	10700	153	793	1751	1853	56918	21763	3	600	600	603	3472	2	603	3472	603	3472	603	3472	603	3472						
3 Richmond	46	1430	18800	331	1240	20829	11963	184760	71655	...	...	...	621	3200	3	621	3200	621	3200	621	3200	621	3200			
4 Victoria.....	4	66	1150	15	641	10044	1414	28212	11599	1	150	150	214	1198	2	214	1198	214	1198	214	1198	214	1198						
5 Antigonish	1	10	200	3	243	3144	732	21023	7862	...	...	...	159	701	...	159	701	159	701	159	701	159	701			
6 Colchester	3	65	800	11	345	6570	415	7818	2545	...	...	...	7	210	...	7	210	7	210	7	210	7	210			
7 Cumberland	28	661	17873	164	2165	47460	16239	324780	76716	46	4085	5375	1342	7377	51	1342	7377	1342	7377	1342	7377	1342	7377						
8 Guysborough	66	1678	38300	450	2489	31672	10683	399243	37763	384	38010	46520	1235	4288	31	1235	4288	1235	4288	1235	4288	1235	4288						
9 Halifax	1	18	300	2	57	1110	65	7785	1231	...	...	...	...	...	...	...	...	...	...	...	...	...
10 Hants.....	1	30	400	3	306	6813	343	12218	5628	...	...	...	29	168	...	29	168	29	168	29	168	29	168			
11 Pictou	13	306	4800	78	158	3175	263	16380	6565	...	...	...	290	1495	...	290	1495	290	1495	290	1495	290	1495			
12 Annapolis	57	1819	43650	532	467	20095	634	17465	3089	39	3195	5985	390	9350	3	390	9350	390	9350	390	9350	390	9350						
13 Digby	2	32	900	8	65	1090	117	4820	2220	...	...	...	34	190	...	34	190	34	190	34	190	34	190			
14 King's.....	169	13845	596680	2650	2434	64965	16125	322500	98360	218	21530	36825	1526	45600	132	1526	45600	1526	45600	1526	45600	1526	45600						
15 Lunenburg	9	320	13900	68	450	9969	1506	26186	11634	7	750	1500	47	188	...	47	188	47	188	47	188	47	188						
16 Queen's	57	2194	80425	586	1869	50005	16125	324600	43765	1	1600	500	380	2255	8	380	2255	380	2255	380	2255	380	2255						
17 Shelburne	44	1987	64770	527	887	9046	3235	107450	18253	...	...	...	265	1850	11	265	1850	265	1850	265	1850	265	1850			
18 Yarmouth																													
Totals.....	553	25342	901498	5705	15366	322437	75316	1961063	454526	700	69300	98205	273	85290	7556	7556	84336	7556	84336	7556	84336	7556	84336						

RECAPITULATION—Continued.
Showing the Number, the Quantity and Value of Fishing Materials, &c.—Continued.

Number.	COUNTIES.				FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
	Weirs.		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed		Freezers and Ice Houses		Smoke and Fish Houses		Piers and Wharfs.		Tugs, Steamers and Snacks.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	No. of hands employed	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	
1	Cape Breton	25	500	121	9525	3869	1953	15	16156	61199	26170	508	26	700	304	7643	137	4330	19	5950
2	Inverness			52	165	5187	3860	27	15400	55000	30905	533	24	2080	216	8620	80	58363	16	928
3	Richmond			21	320	4426	1950	15	11550	79050	30095	2303	2	750	297	8070	19	2500	29	2635
4	Victoria			1	5	2383	1431	17	6060	13699	5931	237			90	5790	23	4563	4	150
5	Antigonish					408	165	6	6500	26160	11720	153	1	300	197	1799				
6	Colchester	27	5500	12	120	12	12	1	700	1500	1200	11	9	700	43	1305				
7	Cumberland	12	335	103	1463	91	69	31	23805	45265	25961	335			23	678				
8	Guysborough			22	400	4075	2101	34	38675	111850	60620	523	24	19575	634	26493	278	28410	23	22575
9	Halifax			1	25	4681	2171	20	16500	62680	28094	327	13	500	887	23504	570	14514	16	8110
10	Hants	10	1045			48	6								6	100				10
11	Pictou			12	295	347	236	28	30895	43175	25855	381	11	117						11
12	Annapolis	15	2250			383	383			3550	3475	47	11	525	133	4505				*
13	Digby	26	2775	15	505	1668	4442	11	15150	28885	20190	894	58	4120	140	7225	57	42800	15	5550
14	King's	36	8100			191	191						26	1300	79	4030				14
15	Lunenburg			1	12	2200	3300	6	2000	12000	9050	352	3	650	350	24000	195	21010	13	1250
16	Queen's					964	1034	13	2550	12700	5080	88			190	3825	28	583	5	2850
17	Shelburne			4	300	3129	4606	12	16300	101320	61407	227	16	2800	393	24070	166	23732	3	7600
18	Yarmouth	5	990	3	95	2615	1322	11	15250	23150	23150	651	8	3600	64	7700	17	9950	19	16925
	Totals	156	21495	368	13230	36677	29232	247	217491	681173	368903	7570	232	37717	4046	159657	1570	210755	162	74523

* Two canneries = \$1500.

RECAPITULATION—Continued.

RETURN showing the Kinds and Quantities of Fish and Fish Products in the whole Province of Nova Scotia, &c.—Continued.

KINDS OF FISH.																			
COUNTIES.																			
Salmon.			Herring.			Mackerel.		Lobsters.		Cod.		Haddock.			Hake.				
Number.	Fresh.		Preserved in cans.	Smoked.	Salted.	Fresh.	Smoked.	Fresh.	Salted.	Lbs.	Cwt.	Dried.	Tongues and sounds.	Fresh.	Dried.	Smoked finnan haddies.	Dried.	Sounds	Number.
	Lbs.	Lbs.	Lbs.	Lbs.	Brls.	Lbs.	Lbs.	Lbs.	Brls.	Lbs.	Cwt.	Cwt.	Brls.	Lbs.	Cwt.	Lbs.	Cwt.	Lbs.	
1	Cape Breton.....	22500	...	*292	5160	46100	1500	16400	454	477072	23066	23827	51	1300	3567	...	232	...	1
2	Inverness.....	31934	50	...	5687	1056000	...	72760	2073	257756	...	27433	43	9850	2717	...	3494	1370	2
3	Richmond.....	1635	17	...	17051	53150	...	43418	7152	348622	3641	26287	66	36284	9329	1746	606	633	3
4	Victoria.....	8265	720	*723	1757	170950	...	8010	547	120436	151	12218	14	...	2057	...	473	...	4
5	Antigonish.....	27660	...	...	2064	...	...	143100	300	130848	...	891	..	...	290	...	2575	5463	5
6	Colchester.....	101828	...	...	20	3000	4000	...	...	20208	...	142	...	1900	31	...	10	...	6
7	Cumberland.....	10545	...	...	345	2400	1700	1380	...	489168	...	900	2	...	375	...	70	300	7
8	Guysborough.....	22715	4000	2000	9445	1091900	...	408804	929	825936	2282	25979	17	1721400	4760	150000	2086	940	8
9	Halifax.....	14950	...	3050	6912	35800	7500	2217025	1081	473384	13073	39746	67	258850	3165	500	3798	2519	9
10	Hants.....	7940	...	...	75	4500	2500	...	...	...	...	119	...	...	26	...	...	...	10
11	Pictou.....	25300	...	...	11	139000	...	4450	...	419376	410	512	...	...	50	...	747	35	11
12	Annapolis.....	5750	...	...	2540	2500	2000	5000	40	...	1515	5925	25	20300	10625	9600	14525	6925	12
13	Digby.....	1470	...	...	3017	1087151	66100	65300	...	27408	20794	36697	115½	1298518	30931	1126870	165548	35100	13
14	King's.....	61950	...	...	1140	3000	470000	...	4	...	...	541	...	...	415	...	145	...	14
15	Lunenburg.....	14600	...	752	4807	218700	...	23520	701	129448	704	298290	698	93550	7846	...	1525	490	15
16	Queen's.....	16580	...	450	1536	...	...	...	89	146880	3257	9540	...	...	363	...	42	...	16
17	Shelburne.....	4210	...	...	13685	...	...	27200	74	294860	48879	72950	29½	10500	13015	15250	17	...	17
18	Yarborough.....	7285	...	...	5350	59000	1750	655750	10	676000	16690	50813	8	129650	6293	50000	800	...	18
Totals.....		387087	4787	*6252	80632	3973151	557050	3692117	13454	4837402	131462	629810	1136	3582102	126355	1353966	196693	53775	

* Barrels, salted, total 1,015.

RECAPITULATION—Concluded.

Return showing the Kinds and Quantities of Fish and Fish Products in the whole Province of Nova Scotia, &c.—Concluded.

COUNTIES.	KINDS OF FISH—Con.															TOTAL VALUE.	Number.			
	Pollock.	Halibut.	Trout.	Shad.	Smelts.	Alwives or Gaspereaux	Bass.	Fels.	Clams.	Oysters.	Flounders.	Tom cod or frost fish.	Squid.	Coarse and mixed fish.	Fish oil.			Fish as bait.	Fish as manure.	
	Cwt.	Lbs.	Lbs.	Brls.	Lbs.	Brls.	Lbs.	Lbs.	Brls	Brls	Brls	Lbs.	Lbs.	Brls.	Brls.	Galls.	Brls.	Brls.	\$	cts.
1 Cape Breton..	5392	87695	1300	.....	21410	103	.....	.....	113	.....	.....	4700	..	213	84	13722	1986	.....	387,260	00
2 Inverness.....	..	7610	11690	.....	25825	350	100	.....	315	.....	180	.....	440	4728	4094	14606	7840	3820	311,898	75
3 Richmond.....	4442	43280	4375	25	32400	2175	.....	.....	419	.....	.....	141405	31600	725	6637	16978	5260	.....	473,880	04
4 Victoria.....	223	14600	700	..	9700	52	.....	.....	91	.....	170	.....	4300	1677	153	9299	996	.....	127,370	85
5 Antigonish.....	.....	.....	1800	.....	11900	74	4450	.....	67	13	69	48510	..	37	70	1571	1714	656	83,161	00
6 Colchester..	7	1200	7500	2003	22000	450	1400	.....	2	300	239	..	.....	.....	.....	130	13	100	50,975	00
7 Cumberland.....	120	3475	1160	433	71050	542	1000	.....	40	44	1279	.....	.....	.....	.....	75	2581	2400	128,149	00
8 Guysborough.....	5292	349000	14630	2	37300	888	4000	.....	405	559	.....	10400	41900	3774	6913	32285	9890	3478	608,749	00
9 Halifax.....	12612	215795	9215	.....	29700	290	.....	.....	102	926	.....	79300	35900	516	420	20508	1991	1650	732,678	00
10 Hants.....	24	.....	5700	770	1500	360	.....	.....	4	175	.....	2000	1000	.....	.....	.....	4	.....	12,916	00
11 Pictou.....	.....	.....	7600	.....	43800	78	.....	.....	107	28	90	.....	600	.....	.....	42	1846	1405	105,112	28
12 Annapolis.....	6240	.....	9100	.....	.....	100	700	.....	4	.....	.....	500	800	.....	2000	3400	635	510	133,496	25
13 Digby.....	35856	484097	2267	159	35500	690	310	.....	96	341	.....	22525	.....	240	35370	59176	22400	67730	1,246,218	30
14 King's.....	461	900	800	255	.....	860	.....	.....	.....	.....	.....	.....	.....	.....	.....	75	520	640	38,379	75
15 Lunenburg.....	856	102190	1500	.....	17700	175	.....	.....	166	68	.....	282550	4100	562	5395	191171	3563	652	1,403,791	45
16 Queen's.....	257	8700	7100	.....	600	680	.....	.....	27	.....	.....	.....	.....	.....	.....	3525	160	.....	102,301	00
17 Shelburne.....	7669	134220	9375	..	3075	1390	.....	.....	104	.....	.....	.....	4900	.....	23	26165	25579	.....	778,691	50
18 Yarmouth.....	19052	20400	9000	.....	12600	2550	.....	.....	175	..	.....	2000	74115	200	2850	9100	2080	1125	622,574	75
Totals....	98503	1473162	104812	3647	376060	11807	11960	2237	2454	2027	593890	199655	12762	64009	401828	99058	84166	.....	7,347,603	92

RECAPITULATION

OF the Yield and Value of the Fisheries of the whole Province of Nova Scotia for the Year 1899.

Kinds of Fish.		Quantity.	Rate.	Value.	Total Value.
			\$ cts.	\$ cts.	\$ cts.
Salmon, fresh	Lbs.	387,087	20	77,417 40	
" preserved in cans	"	4,787	15	718 05	
" smoked	"	6,252	20	1,250 40	
" pickled	Brls.	1,015	15 00	15,225 00	94,610 85
Herring, pickled	"	80,632	4 00	322,528 00	
" fresh	Lbs.	3,973,151	01	39,731 51	
" smoked	"	557,050	02	11,141 00	373,400 51
Mackerel, fresh	"	3,692,117	12	443,054 04	
" salted	Brls.	13,454	15 00	201,810 00	644,864 04
Lobsters, preserved in cans	Lbs.	4,837,402	20	967,480 40	
" fresh in shell	Cwt.	134,462	5 00	672,310 00	1,639,790 40
Cod, dried	"	629,810	4 00	2,519,240 00	
" tongues and sounds	Brls.	1,136	10 00	11,360 00	2,530,600 00
Haddock, fresh	Lbs.	3,582,102	03	107,463 06	
" dried	Cwt.	126,355	3 00	379,065 00	
" smoked finnan haddies	Lbs.	1,353,966	06	81,237 96	567,766 02
Hake, dried	Cwt.	196,693	2 25	442,559 25	
" sounds	Lbs.	53,775	50	26,887 50	469,446 75
Pollock	Cwt.	98,503	2 00		197,006 00
Halibut	Lbs.	1,473,162	10		147,316 20
Trout	"	104,812	10		10,481 20
Shad	Brls.	3,647	10 00		36,470 00
Smelts	Lbs.	376,060	05		18,803 30
Alewives	Brls.	11,807	4 00		47,228 00
Bass	Lbs.	11,960			1,191 00
Eels	Brls.	2,237	10 00		22,370 00
Clams	"	2,454			8,180 00
Oysters	"	2,027	4 00		8,108 00
Flounders	Lbs.	593,890	05		29,694 50
Tom Cod or frost fish	"	199,655	05		9,982 75
Squid	Brls.	12,762	4 00		51,048 00
Coarse and mixed fish	"	64,009	2 00		128,018 00
Fish oil	Galls.	401,828	30		120,548 40
" as bait	Brls	99,058	1 50		148,587 00
" as manure	"	84,166	50		42,083 00
Seal skins	No	8	1 25		10 00
Total for 1899					7,347,603 92
" 1898					7,226,034 40
Increase					121,569 52

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Values of all Fishing Materials in the whole Province of Nova Scotia for the Year 1899.

Articles.	Value.	Total.
	\$	\$
553 fishing vessels (25,342 tons).....	901,498	
15,366 fishing boats.....	322,437	
75,316 gill-nets (1,961,063 fathoms).....	454,526	
700 seines (69,300 fathoms).....	98,205	
273 trap-nets.....	85,290	
156 weirs ...	21,495	
7,556 trawls ...	84,336	
36,677 hand lines.....	29,232	
368 smelt nets.....	13,230	
		2,010,249
247 lobster canneries.....	217,491	
681,173 " traps.....	368,903	
		586,394
232 freezers and ice houses. ...	37,717	
4,046 smoke and fish houses.....	159,657	
1,570 piers and wharfs (fishing).....	210,755	
162 tugs or smacks	74,523	
2 fish canneries.....	1,500	
		484,152
Total value of fishing capital invested.....		3,080,795

Number of persons employed in the fisheries of Nova Scotia, 1899.

Men in fishing vessels.....	5,705
" boats	19,466
Persons employed in canneries (lobster).....	7,570
Total.....	32,741

APPENDIX No. 4.

NEW BRUNSWICK.

District No. 1, comprising the county of Charlotte.—*Inspector J. H. Pratt, St. Andrews.*

District No. 2, comprising the counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert.—*Inspector R. A. Chapman, Moncton.*

District No. 3, comprising the counties of St. John, King's, Queen's, Sunbury, York, Carleton and Victoria.—*Inspector H. S. Miles, Oromocto.*

DISTRICT No. 1.

REPORT ON THE FISHERIES OF DISTRICT No. 1, NEW BRUNSWICK,
COMPRISING THE COUNTY OF CHARLOTTE, FOR THE YEAR
1899, BY INSPECTOR JOHN H. PRATT.

ST. ANDREWS, N.B., January 2, 1900.

The Hon. Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith my eleventh annual report on the fisheries of District No. 1, New Brunswick, comprising the county of Charlotte, and the lakes forming a portion of the international boundary line separating New Brunswick from the adjoining State of Maine. I also include the several tabulated statements showing the yield and value of the sub-districts, together with a synopsis of the reports of the numerous fisheries officers, which I trust will fully explain to your department the many fishing industries busily occupying the time of the hardy toilers of the sea in this district.

It gives me considerable pleasure to be in a position to report that the last season's catch and value show an increase over 1898 amounting to over \$71,000. This surplus is mostly due to the greatly increased catch of sardine herring by the weirs, which exceeds that of the previous year by 44,021 barrels, aggregating for this class of fish alone 213,921 barrels. Other favouring influences contributed to the above pleasing results, and glancing backward from the threshold of the new year on the results of the past twelve months' operations, it is quite apparent that the fishermen of this district have many causes for thankfulness for the abundant harvest they have reaped from the sea.

I trust I may be pardoned for reiterating the statement made in my last annual report, that in no part of the maritime provinces does the sea yield such a valuable and continuous contribution to the fisherman's wealth as it does here in the swift rushing and treacherous tides of the much dreaded Bay of Fundy.

During the past season I made, as in past years, numerous cruises to the coasts of Nova Scotia, Cape Breton, and Prince Edward Island, and, therefore, was enabled to observe the fisheries of those provinces, and the methods employed in conducting them and it was quite evident to the most ordinary observer that the Bay of Fundy fisher-

SESSIONAL PAPER No. 22

men's proximity to the United States markets, the greater competition among the buyers, the more sheltered fisheries, and the almost continuous fishing of various kinds throughout the whole year, places the fishermen of the bay in a position for the attainment of gain unequalled by those of any other district on the Atlantic Coast of the maritime provinces. Their comfortable and well-furnished homes bear testimony to the foregoing, and very agreeably surprises any stranger who may have the good fortune to visit any of the prosperous fishing villages located on the shores of the Bay of Fundy.

An increased number of sardine herring weirs will also be noticed in the returns for materials. This increase was entirely owing to the strong competition for small herring created by the two wealthy syndicates manufacturing sardines in the adjoining State of Maine, thus ensuring to the weir owners a certain price for their catch, and, as these syndicates employed a number of steamers for boating the catch to Eastport instead of sailing boats as formerly, the sale of all the fish caught was assured. The fishermen owning weirs located at the greatest distance from Eastport, that in years past yielded poor returns on account of the difficulty experienced by the sailing vessels that should purchase their catch landing the same at Eastport in good condition, were agreeably surprised at the financial results from many of those out-of-the-way weirs. Many of those weir men who did not possess sufficient courage to brave the hardships of the Klondyke felt that instead the Klondyke had come to them. It is to be sincerely hoped that the coming season of 1900 will yield those deserving fishermen equally gratifying returns on their ventures.

In order that you may better notice the fluctuations in the values of the annual catch in this district, it may be well to give here the annual value of the same for the past ten years. They are interesting, and to very many persons somewhat surprising:—

Total for		Total for	
1890.....	\$1,062,756	1895.....	\$ 968,203
1891.....	1,279,977	1896.....	1,108,701
1892.....	863,465	1897.....	870,287
1893.....	771,182	1898.....	1,145,361
1894.....	1,118,477	1899.....	1,216,394

An increase of over \$51,000 will be observed in the returns, showing the value of fishing materials used this season over that of 1898, which consisted of a general addition of nearly all kinds to the already large stock of material now used. A couple of schooners and a large number of very fine boats were amongst those additions.

Numerous sloop boats for the carrying of fish and general purposes are being acquired by the fishermen each season, principally by those residing at West Isles and Grand Manan, and really the term yacht would be the most appropriate word to apply to those beautiful sloop boats, they being built with a view to speed and a desire to please the nautical eye, without surrendering too much of their carrying capacity.

One of the sad phases of the life of a fisherman can be noticed in the many homes made sorrowful by frequent visitations of the hand of death. This grim visitor has invaded many former happy homes in this district during the past twelve months, and even since the receiving of the bounty claims at the beginning of November, I find that through death a number of bounty cheques will require to be transferred to the names of the widow or the orphan.

The fishermen now seem to be directing more attention towards preserving fish, and an increased number of kippered herring and finnan haddies are being canned; an increased number of canned scallops and clams are also being put on the market. At a factory erected at Welchpool, Campobello, marine products such as sardines, lobsters and scallops are being hermetically sealed in transparent glass jars, and since being placed on the market have met with well merited encouragement. Our fishermen are awakening to the fact that there is a big market for fish properly cured by canning or otherwise, and their catch will thus yield them better financial returns. This is quite evident to the residents of the island of Grand Manan where several new kippered herring factories have been erected at a cost aggregating about \$7,000, and which packed about 5,000 cases during the past season.

64 VICTORIA, A. 1901

HERRING.

I beg to call your attention to the increased catch during the year just closed of this, the all important fishery of this district. Not only has the catch of small herring for sardine purposes shown an increase, but the larger kind, which were pickled, smoked and kippered, will show an increase in the catch also. Quite a number of new herring weirs were added to the large number already erected, and as a result a successful season has rewarded the fishermen's efforts, and an increased price was received from the United States canning factories. The herring are still plentiful, although year after year the wise prophets that are to be found in each fishing district of this county have been prophesying the total disappearance from those waters of the herring, both large and small, but still the annual catches show that those 'wisemen' are fortunately disappointed in their gloomy predictions. Certainly the schools of herring do not act the same each season, but we are all aware that herring are somewhat irregular in their habits. The catch of the smaller kind alone, which were used for sardines, aggregated 213,921 barrels this season, and their value was \$427,842.

Many people advocate removal of all weirs, and thus prohibit the taking of all small herring for manufacturing into sardines or any other purpose. The value given above for this catch alone will serve to show what a terrible blow this proposition would be to Charlotte County, and how cautiously such a matter should be approached, more especially when it is known that those advocating the prohibiting of the catching of small herring have only unconfirmed theories to warrant them in their assertions.

It might be of interest to state here that the pack of the sardine factories in the adjoining State of Maine during the past year was 1,172,000 cases, being 5,000 cases less than that of last season. It must be borne in mind that in the state of Maine there are about seventy-six sardine factories, a number having been built during the past year, and fifty-six of these factories are located at Eastport, Lubec and vicinity. I may also state that these factories employ nearly nine thousand hands, disperse about \$700,000, and the value of this past season's pack was \$3,516,000.

Although the market for sardine herring does not require more than 1,000,000 cases, the two syndicates controlling these United States factories, glutted the market in their eager competition for business, and accordingly the price per case was not as satisfactory as it might otherwise have been. At present there is good reason to believe that one syndicate will absorb the other and the surviving one will be known as the Sea Coast Packing Company. They will be better able to control the markets, and when I state that these two syndicates have about \$1,500,000 invested in those sardine enterprises, a better idea can be formed of the magnitude of the work being carried on in these waters.

Although the returns for herring show only 7,931 barrels pickled in the whole district, I find that in Eastport and Lubec alone the dealers there put up about 20,000 barrels of pickled herring, which nearly all came from the weirs in this district, especially those located at Grand Manan.

Sardines were first canned at Eastport in 1875, by Julius Wolff, Esq., who erected a small factory. This attempt was a failure, the fish being dried only by the sun. The experiment of frying them in oil was found more satisfactory, several more factories were erected in the following years and their number has gradually increased until there are seventy-six in the state of Maine.

SALMON.

The catch of salmon will show a slight decrease from the previous season's catch, but not sufficient to indicate anything of an alarming nature. The St. Croix is the river where nearly all the salmon are taken in this district and the fisheries officer in charge of that river, Frank Todd, Esq., reports these fish as steadily increasing in numbers, and believes that they will continue to do so while they are so well protected as they are now, and also assisted by the annual planting of fry. The Marine and Fisheries Department appropriated some 400,000 fry this year, but it is a question whether that amount was really placed in the river.

SESSIONAL PAPER No. 22

Salmon have been seen more frequently this season than ever before in the Magaguadavic and Pocologan rivers and there is hardly a doubt that as a result of more vigilant protection by the several officers they are beginning to increase in numbers in the rivers above named. A number of salmon were seen above the fishways at St. George, and there is every indication that salmon are now ascending this river annually in increasing numbers.

LOBSTERS.

I regret to have to report a decrease in the catch of lobsters. There is no doubt whatever that they are becoming scarcer, the number of traps being used is increasing and so is the number of fishermen handling them. Under these conditions no other results can be expected than the gradual disappearance of this valuable shell fish, and eventually a serious and irreparable injury to this fishery will be the result. Of course, there are difficulties in the matter of proper legislation for their efficient protection, opinions are divided on this matter, but it is pleasant to note that now, when it is plain that lobsters are decreasing in numbers while increasing in value, public opinion is in favour of strong protective measures. However, the importance of this matter is now being strongly recognized by your department, and there is no doubt that benefits will be derived from the measures adopted.

COD.

The statistics will show a slight increase over that of last season in the catch of cod. Good prices prevailed during the season, and a ready market was found for the entire yield. This catch would have been greater but for the fact of so many line fishermen having deserted their calling and ventured into weir fishing. Many poor men were sorely disappointed in their experiment, as they did not sufficiently realize the heavy costs and uncertainties of herring weir fishing. The immense schools of dogfish also interfered very much with the cod fishermen and were quite a factor in keeping down the catch.

HAKE.

A decrease will be noticed in the catch of hake of about 2,000 quintals, which was mainly due to the large schools of that scourge to the fishermen, the dogfish. These sea vultures struck into the Bay of Fundy earlier than ever before, they were in greater numbers, and prolonged their stay to an unusual length. The destruction wrought by them on the poor fishermen was great, but there was nothing he could do but gaze on their ravages with the calm air of a philosopher. However, it is pleasant to report that high prices were paid for hake during the year, which made the season's hake fishing a very satisfactory one.

HADDOCK.

About the same catch as last season will be noticed in the returns, and a greatly increased portion were used for finnan haddies. About 316,000 pounds were smoked into haddies, and 24,000 pounds of these haddies were afterwards canned. The manufacture of finnan haddies is becoming quite an industry in this district, which is not very surprising when the quality of these goods is taken into consideration. The increase in the quantity canned this season was double that of 1898. This canning industry affords the fishermen a steady and certain sale for their catch, whilst selling fresh to buyers is always attendant with various uncertainties.

64 VICTORIA, A. 1901

HALIBUT.

A considerable decrease will be noticed in the catch of halibut, but it must not be supposed that this falling off is any evidence that halibut are scarcer, but it is because several fishermen who formerly engaged in this kind of fishing are now embarked in other branches of the fishing industry. On the several grounds, the halibut can be found as plentiful as ever, and no doubt that next season halibut fishing will be resumed with the same energy as in past years.

FISH-WAYS.

The numerous fish-ways in the district are all in an effective condition. The ones located at the mouth of the Magaguadavic River are still in good order, which is mainly located to the good care exercised by the fishery officer there, George Hall, Esq. Should salmon ascend the Magaguadavic River in any numbers it will be found necessary to put a fish-way at the upper falls, but instead of erecting a wooden fish-way as before, one could be blasted out of the rocks at the falls with little expense, thus forming an easy natural pass. This, however, will be a matter for the future consideration of your department, and on which I shall report more fully at a later date. Those on the St. Croix River are well looked after by Officer Todd, and are all in thoroughly good condition, all fish passing through them without experiencing any difficulty.

CAMPOBELLO FISHERY ASSOCIATION'S EXHIBITION.

The annual exhibition and yacht races of the above association were held on Thursday, October 19, at Welshpool, and were very largely attended. Beautiful weather prevailed during the day allowing the land sports to be carried out successfully, and a splendid breeze favoured those who took a pleasure in the sailing races. As directed by your department, I gave what assistance possible to make the exhibition a success, and the president very courteously appointed me on the racing committee as one of the judges, the races being started by the gun of the *Curlew* from a position near the stern. The exhibits of the several kinds of fish were superior to that of previous years and connoisseurs declared they could not be excelled. A large amount of money was awarded in prizes to successful exhibitors, which assists, no doubt, in materially encouraging the exhibitors to take unusual care in the preparation of their fish.

A better class of boats than heretofore competed in the various races and it is quite evident that this annual regatta is educating the fishermen to the fact that good sailing boats are essential for successfully conducting all fishing operations. If all fishing communities were aware of the benefits to be gained by annual fishery exhibition of this nature, they would have but little hesitation in the organising of one of those societies.

A dinner and ball in the Owen Hotel concluded the day's festivities, where over two hundred couples merrily amused themselves, bringing to a close one of those holidays long to be remembered by those who were so fortunate as to be present at this exhibition of the Campobello Fisheries Society.

THE MARINE BIOLOGICAL STATION.

The above named institution temporarily located at St. Andrews, was opened at the beginning of August, and a number of scientific gentlemen, mostly professors from prominent universities began their work there and energetically pursued their researches during the season. They accomplished a considerable amount of valuable work in the study of fish life, and were quite unanimous in the opinion that the waters of this vicinity can furnish the scientist with the greatest variety of specimens of marine life with which to carry on their investigations. This station is constructed with a view of being

SESSIONAL PAPER No. 22

placed on a scow when a new location is desirable, and in this manner to be towed wherever required. A naphtha launch forms part of the station's equipment, and this was kept busy during the season in the gathering of specimens for the scientists' examination. A station of this nature seems to be an absolute necessity in a country possessing the valuable fisheries that Canada has, and is only what other countries, with less valuable fisheries have always possessed.

SYNOPSIS OF FISHERY OFFICERS' REPORTS.

Overseer Fraser, of Grand Manan, reports that the past year has been very satisfactory considering the many complaints of the weir fishermen against the net fishermen for setting their nets too close to the weirs, also, for throwing gurry on the fishing grounds. There were not so very many herring smoked as in 1898, but, many more herring have been packed in barrels, and by comparing the total results, the past year has been very profitable to the large majority of the fishermen. He believes the same quantity of fish, both fresh and manufactured, were exported foreign as last year, say ninety per cent, leaving ten per cent for home consumption. The present year also finds us with four new kippered herring canneries, costing in the aggregate about \$7,000 and manufacturing about 5,000 cases. On account of the small demand for them, the greater part of this output has been stored for future sales. There were some attempts at illegal fishing, although he succeeded eventually in compelling respect for the law. Some stringent measures should be taken to protect the spawning herring, also the throwing of gurry on the fishing grounds. He was estimating the amount of gurry disposed of in the entrance of Grand Harbour and Long Pond last season, as follows, sixty sail of vessels averaging two months time, ten buckets to a barrel, and one barrel each day to a vessel. This makes sixty barrels a day and 3,600 barrels in that vicinity during the two months' fishing. He might possibly overestimate but does not think he is far from being correct, showing the great injury it must be to the fisheries. The catch of cod and pollock was not as big as last year. The statistics of the lobster catch will show a decrease. The catch of herring was up to the average of previous years, and although the fishermen did not smoke as big a quantity as in 1898, they salted more in barrels for purposes of export.

Overseer Campbell, of St. Andrews, reports that line fishing has not been followed as usual, not from any scarcity of fish, but because more attention has been given to weir fishing. There were eleven new weirs erected for the catching of sardine herring, and with very few exceptions all the weirs in the district had a very profitable season. The average value of the catch of each weir was much larger than ever before. The herring schools lay in the St. Croix River this season longer than for some years, and, therefore, the weirs at Mascarene, Latete and Back Bay, did not do as well as in 1898, but the price was much better, averaging \$4.25 per hogshead, while in 1898 the value was less than three dollars. Lobster fishing in Passamaquoddy Bay was the poorest he ever saw, and fewer traps were set and the catch was smaller than ever before. Sometimes fifty traps would be pulled, and not more than five lobsters would reward the fishermen for his labours. This fishery has been getting poorer each year and now bids fair to become almost extinct. He is unaware as to the cause for this unless it is over fishing, and the returns for the men in the district do not represent the catch by any means, as large numbers of traps are set all over the bay by men from Deer Island and the returns for their catch is collected, no doubt, by Officer Lord. There is no regulation for setting the traps, and as these inner waters are not so rough as outside and more easily fished, the traps are put down inside Hardwood Island and along the shore very close together, and it is not very surprising that the catch of lobsters is decreasing. There have been seven schooners taking clams in this vicinity during the past season, They hail mostly from Lockeport, N. S., and require the clams for bait purposes, taking away in all 877 barrels of shelled clams. There was, besides, shipped to Boston in the shell, 1,700 barrels of clams during the past season. The line fishing has not been as good as in 1898, due mainly, on account of more attention being given

to weir fishing. This season's body of herring seems to be as large as ever and there were fewer britt, or young herring, than usual. During the latter part of the season the run of fish was mostly too large for canning purposes, and some old fishermen assert that this is owing to the small ones having a chance to grow by reason of the fish becoming scarcer owing to weir fishing. The trout fishing has been as good as usual and less violations of the law, prohibiting their being taken through the ice. Guardian Hall reports salmon having been seen in the St. George River but none taken by fishermen. He does not think that any of the salmon are able to get over the falls at the village, since the wing dam was carried away. In Pocologan River where salmon fry were placed some twelve years since, those fish having become quite plentiful, and, no doubt, many have been taken by illegal means during the season. This poaching is carried on in the pools located in the part of the country not much settled and can only be stopped by having the river patrolled by a guardian during the season.

The closed seasons have been fairly well observed, and few violations occurred until the last of October. At that time a large number of fishermen who had been 'torching' and seining on the American side of the St. Croix River, followed the fish into our waters, and for a short time were very bold about St. Andrews and Chamcook, and, in fact, over most of my district. The names and numbers of the vessels were painted out, and in the inky darkness it was hard to get the names of the parties or to make seizures without help. Warden French, of the United States staff of officers connected with their Fishery Bureau, with the assistance of a steam boat, made it very warm for those poachers whilst operating on the American side, and eventually succeeded in driving them over to the Canadian side. It is pretty difficult for two or three men, without arms or help, to prevent illegal work over bays, rivers and inlets, representing a shore line of more than one hundred miles. However, we will endeavour to procure the names of those parties who were fishing illegally and have examples made of them.

Guardian MacLean, of Latete, reports fishing for all kinds of line fish was good during the season, but the catch in this district will be found to be small, as quite a number of our line fishermen have deserted it for the weir fishing, which pays much better. The prices paid for line fish this season have been the best for the last ten years or more. The catch of lobsters will be found the same as last year, and the prices paid were very good. The catch of sardine herring was not as large as in 1898, but a good average price was received for all kinds of herring.

Guardian Cross, of Beaver Harbour, states that the fishing industry as a whole has not been as good as last season. More of the fishermen are engaged at weir fishing this year than ever before. The herring have run quite large during the season, and there might have been a great many taken if they had been fished for. The catch of small herring for sardines will show an increase, and more of them were canned here than during previous years. The American Syndicate, running steamers buying sardines here, gave the fishermen better opportunities for selling, and the whole catch was disposed of satisfactorily. The catch of line fish was not so good as the previous year. Not that there was any scarcity of fish, but many of the former line fishermen had embarked in weir fishing. The fishing for scallops and canning them is giving employment to quite a number of men this season, in fact, the demand for canned scallops is increasing each year. The catch of lobsters will show a decrease this year, and they are, no doubt, becoming scarcer, which is entirely due to over fishing. The close seasons have been strictly observed and the saw-dust regulations have been obeyed.

Guardian Hall, the officer in charge of the fisheries at the Lower Falls, on the *Magaguadavic River*, reports as follows:—The middle and upper fish-ways are in as good condition as when first put up, the lower one, however, is somewhat out of repair. Now that the cross dam is gone, I do not see any necessity for it, the salmon being able to ascend quite as readily without its assistance. Quite a number of salmon have been seen in the river above the falls as far up as Bonny River, which is six miles above the fish-ways. They have also been seen in Lake Utopia, but none have as yet been taken with a fly. There is not the slightest doubt, that with proper protection, this river and tributaries can be made as good as any in the province.

SESSIONAL PAPER No. 22

Guardian Patrick McLaughlin, the officer in charge of the lakes in the vicinity of St. George, states, he has frequently visited Utopia, Mill and Trout Lakes, and prevented, to a large extent, illegal fishing. He also visited Pocologan River twice during the season, and found that there had been considerable illegal fishing. The river was full of salmon in the early part of the season and it is pretty hard to prevent poaching unless an officer would patrol the river about three times a week, during the season. He believes that if the salmon were well protected in the Pocologan River it would soon become one of the best salmon rivers in the province of New Brunswick. He would estimate that the catch of trout in his district would be about 6,000 pounds.

Guardian Conrad, who has control of the fisheries on the *Chiputneticook Lakes*, reports that fishing has been very quiet during the past season, there not being more than a half a car load shipped, to the United States. There has been very little poaching carried on. On April 4 he found a net set under the ice which he destroyed, not being able to get it up. On October 10 he seized and destroyed two other nets for which he could find no owners. White perch are becoming very numerous in the lake, and pickerel, landlock salmon and trout, are increasing in numbers. An increased number of sportsmen visited this district during the fishing season, and seemed to be quite well pleased with the sport obtained.

Overseer Todd, the officer in charge of the important salmon fisheries of the *St. Croix River* says, the catch of salmon in my district will be about the same as last year, they are steadily increasing, and will continue to do so under the present efficient protection, and if also assisted by the planting of young fish in the river. The department allowed this river during the season some 400,000 fry, and if this number was really planted each year wonderful results would surely follow. Salmon were taken with the fly during the season about four miles below Vansboro, which is good evidence that these fish are increasing in a satisfactory manner. All the fish-ways on the river are in thoroughly good repair with the exception of the one at Broad's dam, on the Dennis stream. This fish-way should be put in good order before the alewives ascend at the beginning of May, and I do not think you will have any trouble when you notify the owners. Numerous complaints have been made with reference to the deleterious matter flowing into the river from the cotton mills dye house, which, however, I will leave in your hands for what ever action is necessary. I regret to say that poachers still exist along the river, and at every opportunity that offers, endeavour to net salmon or dip them at the fish-ways. However, through the unceasing vigilance of my two officers, Messrs. Glass and Berry, we were able to frustrate every attempt made at illegal fishing. Some attempts were made by poachers on the American side of the river also, but the United States officer on duty there, Albert French, Esq., of Calais, promptly suppressed the poaching at its commencement.

Overseer Lord, of West Isles, in a very full and comprehensive report states:—The season as a whole was a little more prosperous than last year, although, it was not what might be termed an average year. The herring struck in early in the spring, but they did not remain very long. There were no fish at all during the summer, and they were quite scarce in the fall, but the school that came in then was not nearly so large as in former years, in fact, our fall school has been missing for the last few years. The catch of sardine herring exceeded that of last year, but herring suitable for smoking were quite scarce, the few that were taken being sold fresh to Eastport buyers. Very few herring were taken in the nets, and a greater part of the pickled herring shown in my report came from Letang and Grand Manan. The prices paid for sardine herring were considerably lower than last year, averaging \$1 per barrel, against \$1.50 received last year. However, on account of a larger catch this season, very little difference appears in the fishermen's receipts. Hake show a small increase both in the catch and price, but they are not fished for to any extent, some few being taken with the haddock. Quite a decrease will be noticed in the haddock catch, not more than one-half of what was taken last year, with the prices considerably higher. The catch of lobsters are up to the average, with the prices about the same as previous season. A large increase will be noticed in the catch of cod, about four times as large as last year, and a fair average price being paid throughout. Pollock were very plenti-

64 VICTORIA, A. 1901

ful during the season, and my returns will show almost double the catch of last year. There was a good sale for them fresh, and they now command a high price. Owing to the bright prospects showing at present for the future of the sardine industry, a large number of applications for the building of new weirs next season are constantly arriving at this office. Hand-line fishing has been very good this year.

Overseer Charles Savage, of Campobello, states that herring generally were scarcer than in any previous year. Very small quantities were smoked and large herring have almost wholly disappeared from these waters, and this he attributes to the wholesale destruction of small fish for sardine purposes. The sardine herring were scarcer than in any previous year, prices ruled high though, and weir fishing generally, in this district, had a very unprofitable year. A decrease will be noticed in the returns for the catch of cod. Pollock were plentiful, but did not bite well, consequently the catch was below the average. There was a fair catch of hake and haddock, and for some unknown reason, those nuisances to fishermen the dogfish, struck in earlier, stayed longer, and were more numerous than in any previous year. High prices were paid for all kinds of fish, and it can be safely said that line fishing was fairly profitable. More lobsters were caught than last season, which is attributed to unusually good spring weather and the fishermen using more traps. Good prices were paid, especially by the canneries. The different close seasons were well observed.

Chief Boatman, Silas Mitchell, patrolling Coffills Ledge, in Quoddy River, opposite Eastport, states that he carefully patrolled the river with an assistant, and thoroughly prevented any Maine boats from crossing the boundary line and fishing in Canadian waters. There was a large fleet of boats fishing during the summer season on the United States side of the line, that could be seen daily hovering near the better fishing grounds in our waters. The catch of pollock on the river was not as good as in 1898, owing to their schooling in large bodies in shallow waters they would not take the hook. Large hauls were made in some of the weirs. There is no doubt that pollock in Quoddy River is on the increase. The catch of haddock was small when compared with that of the last two years, not more than half a catch was made on the trawl. There have been larger catches of codfish during 1899 than for the last three years, more especially large sized cod. The catch of sardine herring in Lubec Narrows, Herring Cove, Friars Bay, and Harbour DeLute, was small when compared with that of 1898. Large net herring, known as the Quoddy River herring, were scarcer than they have been for many years. The lobster catch was quite small in that part of the river that I patrolled, the close seasons were fairly well observed, and very little illegal fishing was attempted. Very few United States fishing schooners came to Eastport during the past year seeking bait, although, as a rule, a large number come every year when bait is scarce to the westward. Although admirably located to observe those vessels coming to Eastport, for bait, he only noticed two fishing schooners coming for this purpose during the year, the 'Eddie Davidson' and the 'Orpheus,' both of Gloucester, Mass. They took about 50 barrels of herring each.

I have the honour to be, sir,
Your obedient servant,

JOHN H. PRATT,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

DISTRICT No. 2.

REPORT ON THE FISHERIES OF DISTRICT No. 2, COMPRISING THE
EASTERN COUNTIES OF NEW BRUNSWICK FOR THE YEAR 1899,
BY INSPECTOR R. A. CHAPMAN.

MONCTON, N.B., January 2, 1900.

Hon. SIR LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,

SIR,—I have the honour to submit my report of the fisheries in District No. 2, New Brunswick, comprising Restigouche, Gloucester, Northumberland, Kent, Westmorland and Albert counties, for the year 1899, with tabulated statements giving the products and values by districts and counties, together with an estimate of the capital employed in the prosecution of these fisheries.

Returns referred to show an increase in the aggregate value of fish taken over last year of \$167,609, the gross values for the two years being—

For 1898.....	\$ 2,427,415
“ 1899	2,595,024

which fully confirms my preliminary report, as do also the details of each kind of fish caught to which I would beg now briefly to refer.

SALMON.

While the total catch is somewhat under that of last year, caused by the small number taken on the Restigouche River, and waters leading thereto, the fishing was much better on the Miramichi than in 1898, the fly-fishing was also reported good on the streams leading into this river, and all the streams large and small were well stocked during the spawning time last fall. Many of the fishermen urge that the Miramichi hatchery should be supplied with eggs from fish caught in the summer, and pooled, as they contend that those taken from fish caught in the fall, being from a different run, do no good whatever towards increasing summer fishing. This matter is certainly well worth carefully looking into.

SHAD.

I have so often referred to the necessity of a close term for those fish during the spawning season, that I feel it is little use to repeat the reasons therefor, so often stated and discussed.

SMELTS.

At the opening of the season for bag-netting these fish, for past two years, the weather has been very unfavourable and considerable quantities have consequently been lost, or shipped and put on the market in bad condition, therefore many maintain that it would be better to have no fixed date for beginning, but leave the matter with the inspector to allow fishing to commence, whenever the weather permits, be it before or after the 1st of December. Notwithstanding these unfavourable circumstances, large quantities were taken last year, and they are increasing rather than diminishing in our rivers and bays, and proving a great boon to the working people of our country. Instead of extend-

64 VICTORIA, A. 1901

ing the season each year it would be much better to have the time fixed at say February 20 to 25, and then fishermen and dealers would both know just what to depend upon.

BASS.

The catch of this valuable fish is smaller than last year, and I am afraid will continue to be less from year to year, unless hook and line fishing is prohibited at least in the spring while spawning. They grow slow, it consequently takes them a good many years to attain a large size.

HERRING.

While immense quantities of spring herring were taken for food, bait, &c., the fishing on the banks between Caraquet and Miscou in August and September, was not quite as good as usual.

COD.

The catch of cod was large last year, and prices very high, which will stimulate this fishery and largely increase the number of vessels and boats engaged in it, the low prices prevailing in 1896 and 1897 made the business unprofitable, but confidence is now fully restored, and it certainly appears as if the production might be increased manifold.

MACKEREL.

Owing to the large preparations in Kent County with boats, nets, tugs, &c., there is a slight increase in the catch of this fine fish over that of the previous year, but everywhere else on our coasts very few have been taken.

OYSTERS.

While the quantity of really good oysters raked in Buctouche, Cocagne, &c., has been quite up to the average, the take in Miramichi River, Bay du Vin, &c., where most of them are of inferior quality, has been much smaller, more, I believe, owing to want of active demand than from real scarcity.

CLAMS.

A market having been opened in the United States for hard shell clams (cohogs), large quantities of them have been raked at Buctouche and Cocagne, carried by boats to Pointe du Chêne, where they are shipped by the carload. This gives the local officers considerable trouble to prevent oysters being taken by those engaged in the clam fishing.

LOBSTERS.

With the number of traps largely increased the pack is a trifle larger than last year, but less almost everywhere except in the narrow part of the Straits of Northumberland between Chockpish, in Kent County, and the Nova Scotia boundary, and especially from Cape Bald to Cape Tormentine inclusive, where it has very largely increased, the output on some thirty miles of coast amounting to about \$150,000, but whether this is not at the expense of future fish remains to be seen, though certainly the season that suits some other parts of the coast does not appear to answer for this. I would like much to have seen fall fishing tried everywhere, which would have given the female fish a chance to spawn unmolested, and I believe to preserve this valuable fishery it may yet have to be tried. In this connection it is believed by some that the large

SESSIONAL PAPER No. 22

increase of catch in eastern parts of the straits is caused by the fry set afloat from the Pictou lobster hatchery during recent years, and urge that one be established at Shemogue in the county of Westmorland, where on the New Brunswick side alone there are upwards of sixty factories within twenty miles.

I have reports from very few of the local officers, and no facts contained in those received not fully covered by my own report.

I have the honour to be, sir,
Your obedient servant,

R. A. CHAPMAN,
Inspector.

DISTRICT No. 3.

REPORT OF THE FISHERIES OF DISTRICT No. 3, OF NEW BRUNSWICK, COMPRISING THE COUNTIES OF ST. JOHN, KINGS QUEENS SUNBURY. YORK, CARLETON AND VICTORIA, FOR THE YEAR 1899, BY INSPECTOR H. S. MILES.

OROMCTO, January 3 1900.

The Honourable Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries,

SIR,—I am pleased in submitting my report on the catch of fish in this district to be able to state that there is an improvement in the yield from year to year with encouraging and abundant evidence of future increase, resulting largely from the successful work of your department in maintaining an efficient and well equipped hatchery in this district, the benefits of which to the general fishing industry are incalculable, and far reaching, affecting as they do not only the catch in the streams but also that of the harbour and bay.

The estimated value of the catch for the season just closed is \$308,607., which when compared with the value of the catch for 1898, \$276,580., shows an increase of \$32,027.

SALMON.

In the bay the fishing, owing to unusually bad weather, was more difficult and less remunerative than on the clear white bosom of the inner calm of the harbour. The late June freshet was most favourable to the weir owners, and a very marked increase resulted. No less than 700 salmon were placed in the fish pond in Carleton, St. John. In the months of October and November they were stripped and returned to the sea, and were not counted in the statistical returns.

SHAD.

An improvement is shown in this fishery as compared with other years, still there is no doubt that the supply from over fishing has been depleted. The scarcity enhances the value with the result that more men and more boats are engaged, and had we not something to hope for from the artificial hatching and protection of shad by the United States Commissions of Fisheries we might fear an extermination of this delicious fish.

ALEWIVES.

The St. John River counties show in the returns a marked increase in the catch of this fish, with about the usual quantity taken in the harbour.

LOBSTERS

Are overfished all along the coast from Lepreaux to St. Martins, consequently the result is that it takes more traps, more men and more area each year to keep up the general average yield, for while the supply is annually diminishing the demand is steadily on the increase, and this year an exceptionally large catch was taken.

SARDINES.

The demand for this fish has been very good this year and larger catches than usual have been taken. They are excellent lobster bait and a great many were used for that purpose. The surplus supply was disposed of at the L'Etang Packing Factory.

TROUT.

Owing to the fact that very few trout are caught for market, it is quite impossible to get even a fair estimate of the actual catch, still it is by no means correct to suppose that this fish is of the least important of any in the list. All our lakes, rivers and streams abound in trout, which are only caught by hook and line, and very largely by wealthy sportsmen, and the money spent by them in various ways while in pursuit of this sport is considerable.

HAKE AND HADDOCK.

These fish frequent the harbour at St. John where they are in great demand for home consumption, so good prices were readily obtained. They are caught by trawling, &c.

HERRING.

Packers admit that it has been an extraordinary season for obtaining high prices for herring and the supply was far below the demand. Less than usual were used as bait and more as food.

STURGEON

Were so overfished before good protection was afforded them that they are still a minus quantity and few are taken. The high price (\$15) of license is quite a protection still and may be attended by most beneficial results.

BASS.

These fish are wholly confined to the waters of Bellisle Bay in King's County, and like the sturgeon, have been overfished. However, some thirty licenses have been issued this season, and the fishermen have had fair luck.

Synopsis of Overseers' reports.

Overseer Robert Orr of York Co., reports an entire devotion of all his time to the careful watching of all rivers and lakes in his district with a view to strictly enforcing the fishery laws and regulations. One case of an attempt to drift in non tidal waters

SESSIONAL PAPER No. 22

was stopped. He spent the greater part of his time in the south west branch of the Miramichi River, it being the most important fishing grounds in his district. He was assisted by his guardians, otherwise much illegal fishing would have been done. The inspector spent nearly two weeks on the river last summer and went up on the south-west branch as far as he could in a canoe and on the north branch as far as 'Flanagan's Boggan.' The grilse ascended the river all through the summer in large quantities, and after August 15, more salmon were seen than there had been for the last five years. Shad have not been so plentiful for ten years as they have been this season. While on duty he saw several sturgeon in the St. John River.

Overseer O'Brien, St. John Co., reports a very successful catch of all kinds of fish with a marked increase in live fish, sardines, lobsters, and salmon. He had the usual difficulty in enforcing the law and several prosecutions resulted, particularly from the non observance of the Sunday close time.

Overseer Leonard Wilson, of Victoria and Madawaska Counties, reports a successful fishing season in his district. Guardians were on duty to enforce the law, and poachers did not have a chance to do any effective work. In both counties trout and whitefish abound in all the lakes, rivers and streams. Salmon also are plentiful. The fish-way which was put in the dam at Plaster Rock on the Tobique River is not satisfactory. Some changes will be made, so that the trip can be made comparatively easy. No angling should be allowed in the Tobique River for a distance of one half mile below dam and fish-way.

Overseer Isaac J. Hetherington, of Queen's County, reports an average catch in alewives, shad and pickerel, an increase in trout and a decrease in salmon. He found the fishermen most unwilling to give statistics of their catch. The law and regulations were well observed.

King's County (note by Inspector). I have given this county what supervision I could, as I have no overseer in the district. According to instructions received from you last September, I appointed some sixteen special guardians in the several parishes in the county. I may say that Miles G. Jenkins, a special guardian on Bellisle has already rendered good service, aiding me very much in the bass fishing. I might also name Guardian Rickenson, same district.

Carleton County (Inspector). I have no overseer in this county, but the usual number of guardians were employed, viz., one on Maduxnakeag River, two on the St. John River, and one on S. W. Miramichi River, and north branch of the same river. That last named guardian comes under the supervision of Robt. Orr, overseer for York County. Regulations were well observed, and no complaints were made. The dam in Maduxnakeag River has been greatly damaged and there is now a free pass for fish. The fish ladder which was built a few years ago on the stream, is in good order, but has been dry since the damage to the dam. The fish ascend the river instead.

Cecil F. McLean, of Sunbury County, reports a marked increase in the run of alewives, but did not last as long. Eighty per cent of the catch was sold in St. John, the balance used for home consumption. Shad, salmon and pickerel, all up to the average. Pickerel fishermen are now using a larger mesh and are now taking a larger fish, which are bringing a better price in the United States market. I cannot too strongly recommend a fish ladder in the Smith dam, on the Oromocto River. The old fish-way in that dam was never any good. No fish ever went through it.

Respectfully submitted.

Your obedient servant,

H. S. MILES,
Inspector.

NEW BRUNSWICK—District No. 1.

Return showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fishing Materials, &c., in the County of Charlotte, Province of New Brunswick for the Year 1899.

FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Vessels.					Boats.					Gill Nets.					Seines.					Trawls.					Weirs.					Sardine Canneries.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

RETURN showing the Kinds and Quantities of Fish, &c.—New Brunswick—Continued.

DISTRICTS.	KINDS OF FISH.																	Number.		
	Salmon, fresh, lbs.	Squid, brls.	Herring, salted, brls.	Herring, fresh and frozen, lbs.	Herring, kippered in cans, lbs.	Herring, kippered (chickens), lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod, frozen, lbs.	Clams, preserved, cans.	Clams, shelled, brls.	Clams, in shell, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked finnan haddies, lbs.	Haddock, preserved, cans.	Number.
Charlotte County.	2000	...	550	...	103200	15000	2500	...	32304	5575	240	...	39600	890	...	2000	500	...	24000	1
	...	...	8	...	...	...	...	...	...	636	602	...	...	...	...	25100	...	...	...	2
	150	...	1020	...	...	...	36500	1050	...	203	350	...	...	952	1737	180000	325	300000	...	3
	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
	750	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
	...	...	5038	20130000	246000	...	8587000	...	43968	4070	1035	100000	...	...	...	...	450	14000	...	6
	...	160	1054	...	...	...	28775	...	29424	441	509	...	...	...	...	373900	...	1850	...	7
	...	...	261	...	...	...	15000	...	...	200	2274	...	...	...	...	200000	...	200	...	8
Totals.....	2900	160 7931	...	20130000	349200	15000	8669775	1050	105696	11125	5010	100000	39600	1842	1737	781000	1255	316050	24000	

* In No. 1 include 25,000 cans scallop and 24,000 lbs. fresh scallop.

RETURN showing the Kinds and Quantities of Fish, &c.—New Brunswick—Concluded.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.				
		Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Pickarel, lbs.	Sardines, brls.	Sardines, preserved, cans.	Flounders, lbs.	Tom cod or frost fish, lbs.	Coarse or mixed fish, lbs.			Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.
Charlotte County.																				
1	Lepreaux to L'Etang.	2650	2650	175	.....	.....	.....	.....	.....	32400	935000	4800	.....	100	4200	5010	2630	6	197,155 30	
2	L'Etang to St. George.	724	.....	1544	.....	.....	.....	.....	.....	64003	.....	.....	.....	.....	500	.....	.....	.....	1	139,246 00
3	St. George to St. Stephen.	750	.....	237	.....	1000	1800	.....	.....	69143	50000	2600	.....	.....	.....	3500	3500	3	190,571 50	
4	St. George and vicinity.	.....	.....	.....	.....	4000	700	12	.....	.....	.....	500	.....	.....	.....	.....	600	.....	4	833 00
5	St. Stephen and vicinity.	.....	.....	.....	.....	5500	8000	250	3000	.....	.....	.....	.....	25	.....	.....	.....	.....	5	2,330 00
6	Grand Manan.	4950	3800	11445	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15000	1200	300	.....	*	504,028 10
7	Campobello.	4825	3852	4206	20000	.....	.....	.....	.....	15000	.....	.....	.....	.....	6570	785	.....	.....	6	83,228 95
8	West Isles.	498	249	5373	.....	.....	600	.....	.....	33375	20000	.....	.....	.....	1500	800	.....	.....	7	98,873 00
	Totals.	14397	10551	22980	20000	10500	11100	262	3000	213921	1005000	7900	1100	125	27770	11295	7030	9	1,216,259 95	

* Including 75,000 lbs. of dulse.

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 1, New Brunswick, for the Year 1899.

	Quantity.	Price.	Value.
		\$ cts.	\$ cts.
Salmon, fresh, in ice.....Lbs.	2,900	0 20	580 00
Scallops, preserved.....Cans.	25,000	0 15	3,750 00
" fresh.....Lbs.	2,400	0 05	120 00
Herring, pickled.....Brls.	7,931	4 00	31,724 00
" fresh or frozen.....Lbs.	20,130,000	0 01	201,300 00
" smoked....."	8,669,775	0 02	173,395 50
" kippered.....Cans.	349,200	0 10	34,920 00
" " (chickens).....Lbs.	15,000	0 08	1,200 00
Mackerel, fresh....."	1,050	0 12	126 00
Lobsters, canned....."	105,696	0 20	21,139 20
" fresh.....Cwt.	11,125	5 00	55,625 00
Cod, dried....."	5,010	4 00	20,040 00
" fresh or frozen.....Lbs.	100,000	0 04	4,000 00
Clams, in shell.....Brls.	1,737	1 00	1,737 00
" shelled....."	1,842	7 00	12,894 00
" preserved.....Cans.	39,600	0 10	3,960 00
Haddock, fresh.....Lbs.	781,000	0 03	23,430 00
" dried.....Cwt.	1,255	3 00	3,765 00
Finnan haddies, smoked.....Lbs.	316,050	0 06	18,963 00
" " canned.....Cans.	24,000	0 10	2,400 00
Hake, dried.....Cwt.	14,397	2 25	32,393 25
" sounds.....Lbs.	10,551	0 50	5,275 50
Pollock, dried.....Cwt.	22,980	2 00	45,960 00
Halibut, fresh.....Lbs.	20,000	0 10	2,000 00
Trout....."	10,500	0 10	1,050 00
Smelts....."	11,100	0 05	555 00
Alewives, pickled.....Brls.	262	4 00	1,048 00
Pickarel, fresh.....Lbs.	3,000	0 05	150 00
Sardines.....Brls.	213,921	2 00	427,842 00
" preserved.....Cans.	1,005,000	0 05	50,250 00
Flounders, fresh.....Lbs.	7,900	0 05	395 00
Tom cod or frost fish....."	1,100	0 05	55 00
Squid.....Brls.	160	4 00	640 00
Coarse and mixed fish....."	125	2 00	250 00
Fish oil.....Galls.	27,770	0 30	8,331 00
Dulse.....Lbs.	75,050	0 06	4,503 00
Fish used as bait.....Brls.	11,295	1 50	16,942 00
" " manure....."	7,030	0 50	3,515 00
Seal skins.....No.	9	4 00	36 00
Total value of catch for 1899.....			1,216,259 95
" " 1898.....			1,145,361 77
Increase during 1899.....			71,898 18

NUMBER and Value of Vessels, Boats, Nets, Weirs, etc., engaged in the Fisheries of District No. 1, New Brunswick, for the Year 1899.

Material.	Value.	Material.	Value.
	\$ cts.		
50 vessels (tonnage 936).....	18,950 00	239 piers and wharfs.....	40,625 00
1,075 boats.....	90,442 00	11 tugs and smacks.....	9,700 00
668 gill-nets (17,962 fathoms).....	5,970 00	5 sardine factories.....	41,000 00
322 seines (9,379 fathoms).....	21,636 00	4 fish curing factories.....	7,000 00
611 trawls.....	5,545 00	80 weir scows.....	4,000 00
344 weirs.....	142,850 00	55 pile drivers.....	4,500 00
5 smelt nets.....	32 00	25 fish freezers.....	2,800 00
1,290 hand lines.....	786 00	2 clam canneries.....	500 00
7 lobster canneries.....	16,400 00	1 fish guano factory.....	5,000 00
17,702 " traps.....	16,097 00		
7 freezers and ice-houses.....	15,800 00	Total value of material.....	583,788 00
749 smoke and fish-houses.....	134,055 00		

NEW BRUNSWICK—District No. 2.
Return showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., in the District No. 2, Province of New Brunswick, for the Year 1899.

DISTRICTS.	FISHING VESSELS AND BOATS.					FISHING GEAR OR MATERIALS.							
	Vessels.		Boats.			Gill Nets.		Trawls.		Smelt Nets.	Hand Lines.		Number.
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Number.	Value.	Number.	Value.
<i>Restigouche County.</i>	1 Above Dalhousie	1	28	500	5	36	700	36	7500	200	10000	200	10000
	2 Below Dalhousie					190	4000	86	18200	24	1200	24	1200
	Totals	1	28	500	5	226	4700	121	25700	224	11200	224	11200
<i>Gloucester County.</i>	1 Beresford and part of Bathurst	127	1412	51000	500	415	9000	650	60000	100	100	300	200
	2 Caraquet, New Bandon and part of Bathurst ..	20	220	8500	80	550	16500	900	66000	77	3200	2000	1000
	3 Saumarez, Inkerman and Shippegan mainland.	61	710	32000	230	340	6200	1800	84000	145	5500	500	300
	4 Shippegan and Miscou Islands					440	18500	550	25000	35	1300	800	500
	Totals	208	2342	91500	810	1745	50200	3900	235000	297	10000	3600	2000
<i>Northumberland County.</i>	1 Néguaque, etc.	3	39	1500	11	200	7000	800	50000	230	14500	150	200
	2 Bay du Vin, &c.	1	15	400	3	220	9200	800	65000	200	9000	100	150
	3 Chatham, &c.					160	4500	220	40000	370	22600	15	25
	4 South-west and North-west Miramichi Rivers.					110	1500	300	13000				
	Totals	4	54	1900	14	690	22200	2120	168000	800	45500	265	375

SESSIONAL PAPER No. 22

										1	2	3	
<i>Kent County.</i>										200	450	14200	355
1 Richibucto, St. Louis, Carleton, &c.	1	20	500	3	315	11500	550	2700	110000	23500	10	400	355
2 Buctouche, &c.					500	15000	800	500	44000	16000			258
3 Cocagne, &c.					300	9500	500	300	24000	8000			65
Totals	1	20	500	3	1115	36000	1850	3500	178000	47500	10	400	678
<i>Westmorland County.</i>										200	450	14200	355
1 Shediac, Moncton and Salisbury					360	12000	720	680	30000	13000	5	100	125
2 Botsford					355	9500	750	400	16500	4700			55
3 Sackville and Westmorland					45	1200	70	230	8500	3000			45
4 Dorchester					33	2100	66	210	8600	3500			
Totals					793	24800	1606	1520	63600	24200	5	100	225
<i>Albert County in all</i>										4	200	8	
Totals District No. 2	213	2444	94400	832	4573	138100	8174	11171	672100	364000	225	1550	2224
													2635

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	KINDS OF FISH.																	Number.	
	Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.		Shad, brls.
Restigouche County.																			
1 Above Dalhousie	25000								90									7500	1
2 Below Dalhousie	115000		1400	3000				26000	130	140								3000	2
Totals	140000		1400	3000				26000	220	140								10500	
Gloucester County.																			
1 Beresford and part of Bathurst	65000	200	24500	50000	4000	1000		24000	130	1750			200					6000	1
2 Caraquet, New Bandon and part of Bathurst	261000		40000	40000	6000	12000		200500	200	46000	50	500	500	1000		25000		12000	2
3 Saumarez, Inkerman and Shippegan mainland	32000		8500	50000	10000	10000		106200	180	8150	30		2000	4000		10000		6000	3
4 Shippegan and Miscou Islands		8000	10000	10000	10000	6000		356000	140	20500	50		1600	2000		12000		1000	4
Totals	358000	8200	83000	150000	30600	29000		686700	650	76400	130	500	4300	7000		47000		25000	30
Northumberland County.																			
1 Neguac, &c.	90000		5000	10000	10000	5000		50000	120	1500		100	100			2000		6000	1
2 Bay du Vin, &c.	95000		3000			40000		57200	80	200			200			1000		1000	2
3 Chatham, &c.	100000		20	1000						150								5000	3
4 South-west and North-west Miramichi Rivers	85000																	17000	4
Totals	370000		8020	11000	10000	45000		107200	200	1850		100	300			3000		29000	1600

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	DISTRICTS.	KINDS OF FISH.													TOTAL VALUE OF ALL FISH.	Number.
		Smelts, lbs.	Alewives or Gaspereau, brls.	Bass, lbs.	Clams, lbs.	Kels, brls.	Sardines, cans.	Oysters, brls.	Flounders, lbs.	Tom Cod or frost fish, lbs.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.			Seal skins, No.
<i>Restigouche County.</i>																
1	Above Dalhousie	477200	...	...	...	35	...	30000	20000	80	...	...	...	...	...	1
2	Below Dalhousie	120000	...	...	...	45	...	3000	2500	...	...	600	120	...	...	2
Totals		597200	...	...	...	80	...	33000	22500	80	...	600	120	...	...
<i>Gloucester County.</i>																
1	Beresford and part of Bathurst	2000	...	500	10	30	...	10000	5000	...	350	1800	10000	...	...	1
2	Caraquet, New Bandon and part of Bathurst	530000	...	20000	1000	350	...	10000	150000	...	16000	10000	18000	8	...	2
3	Saumarez, Inkerman and Shippegan mainland	385000	1300	8000	200	200	...	4000	10000	500	2000	2000	1000	20	...	3
4	Shippegan and Miscou Islands	225000	...	6500	90	100	...	4000	5000	300	6000	8500	6000	12	...	4
Totals		1142000	1300	35000	1300	680	...	28000	170000	800	24350	22300	35000	40	...	
<i>Northumberland County.</i>																
1	Neguac, &c.	600000	150	30000	300	20	...	4000	20000	...	400	2000	4000	...	...	1
2	Bay du Vin, &c.	650000	100	18000	50	20	...	3000	30000	...	...	3000	5000	...	...	2
3	Clatham, &c.	1500000	1350	50000	50	30	256000	20000	1100000	...	...	...	3000	...	...	3
4	South-west and North-west Miramichi Rivers	...	500	165000	...	300	...	...	...	...	...	...	...	...	...	4
Totals		2750000	2100	263000	400	370	256000	27000	1150000	...	400	5000	12000	...	...
													465,775 00			

SESSIONAL PAPER No. 22

<i>Kent County.</i>																
1	Richibucto, St. Louis, Carleton, &c.	960000	1885	18600	200	480	.....	720	29500	140000	380	1560	3000	2900	12	236,930 00
2	Buctouche, &c.	520000	600	800	8200	150	.....	3200	.....	120000	1090	180	2800	6000	4	153,071 00
3	Cocagne, &c.	160000	400	600	3000	100	.....	1500	.....	50000	200	.....	1600	2000	.....	62,065 00
Totals		1640000	2885	20000	11400	730	....	5420	29500	310000	1580	1740	7400	10900	16	452,066 00
<i>Westmorland County.</i>																
1	Shediac, Moncton and Salisbury	600000	1000	4000	300	80	.....	150	.....	12000	1500	.....	20000	15000	.....	288,660 00
2	Botsford	140000	200	1000	100	40	....	100	.....	10000	...	.....	12000	10000	...	226,040 00
3	Sackville and Westmorland	150000	200	4000	20	30	...	10	.....	4000	....	100	2000	5000	....	29,818 00
4	Dorchester	.....	.....	...	.....	20	.....	.....	.....	2000	.....	100	.....	.....	....	17,720 00
Totals.....		890000	1400	9000	420	170	....	260	.....	28000	1500	200	34000	30000	....	562,238 00
1 <i>Albert County in all</i>		3500	.....	400	.....	35	....	.....	.....	32000	50	50	.....	.....	.....	8,190 00
Totals		7022700	7685	327400	13520	2065	256000	17250	117500	1712500	4010	26740	69300	88020	56	2,595,024 00

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 2, New Brunswick, for the year 1899.

Kinds of Fish.		Quantity.	Price,	Value.
			\$ cts.	\$
Salmon, fresh...	Lbs.	900,800	0 20	180,160
" preserved in cans.	"	8,200	0 15	1,230
" smoked.....	"	400	0 20	80
Herring, salted	Brls.	184,020	4 00	736,080
" fresh.....	Lbs.	266,000	0 01	2,660
" smoked.....	"	90,000	0 02	1,800
Mackerel.....	Brls.	40	15 00	600
" fresh.....	Lbs.	324,400	0 12	38,928
Lobsters, preserved.....	Cans.	2,071,410	0 20	414,282
" in shell.....	Cwt.	2,860	5 00	14,300
Cod.....	"	80,670	4 00	322,680
" tongues and sounds.	Brls.	136	10 00	1,360
Haddock	Cwt.	800	3 00	2,400
Hake	"	6,420	2 25	14,445
" sounds	Lbs.	9,640	0 50	4,820
Pollock.....	Cwt.	40	2 00	80
Halibut	Lbs.	52,400	0 10	5,240
Trout.	"	100,300	0 10	10,030
Shad	Brls.	4,410	10 00	44,100
Smelts.....	Lbs.	7,022,700	0 05	351,035
Alewives	Brls.	7,685	4 00	30,740
Bass	Lbs.	327,400	0 10	32,740
Clams.....	Brls.	13,520	2 00	27,040
Eels.....	"	2,065	10 00	20,650
Sardines, preserved.....	Cans.	256,000	0 05	12,800
Oysters.....	Brls.	17,250	4 00	69,000
Flounders.	Lbs.	117,500	0 05	5,875
Frost fish or Tom cod.....	"	1,712,500	0 05	85,625
Squid.	Brls.	18	4 00	72
Coarse fish.....	"	4,010	2 00	8,020
Fish oil.....	Galls	26,740	0 30	8,022
Fish as bait.....	Brls.	69,300	1 50	103,950
Fish as manure	"	88,020	0 50	44,010
Seal skins.....	Pieces.	56	1 25	70
Totals, 1899.....				2,595,024
" 1898.....				2,427,415
Increase.				167,609

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Number and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 2, **New Brunswick**, in the year 1899.

Material.	Value.	Total.
	\$	\$
214 fishing vessels (2,444 tons)	94,400	
4,573 fishing boats.	138,100	
672 100-fathom gill nets.....	364,000	
2 mackerel trap nets	3,000	
225 trawls.....	1,550	
350 bass nets.	1,500	
2,224 smelt nets.....	105,700	
4,455 hand lines.....	2,635	710,885
209 canneries.....	129,150	
210,100 lobster traps	192,200	321,350
138 freezers and ice houses.....	56,100	
385 fish and smoke houses.....	36,330	
35 piers and wharfs.....	7,380	
47 tugs and smacks.....	20,000	
730 smelt shanties.....	10,950	130,760
		1,162,995

NEW BRUNSWICK—District No. 3.

Return showing the Number, Tonnage and Value of Vessels and Boats, Nets, &c., and the Quantity and Value of Fish caught in District No. 3, Province of New Brunswick, for the Year 1899.

DISTRICTS.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.				KINDS OF FISH.											
	Vessels.		Boats.		Gill Nets.		Seines.		Weirs.		Salmon, fresh, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	Lobsters, cwt.	Cod, dried, cwt.					
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.						Number.	Value.			
St. John County.																				
1 St. John Harbour	2	40	800	15	220	8400	440	2270	68900	68900	8	400	640	27	10800	157700	1000	126000	420	125
2 Dipper Harbour.	5	100	2000	25	75	4500	150	820	24500	24500	5	250	400	12300	175	12300	175	2400	2400	145
3 Pisarino.	2	40	800	10	65	6500	130	2010	60500	60500	5	250	400	75790	260	75790	260	1580	1580	140
4 Musquash.	1	20	400	4	50	3000	100	1300	40000	40000	12	600	960	18720	150	18720	150	580	580	50
5 St. Martin's.	1	20	400	4	50	3000	100	1300	40000	40000	12	600	960	18720	150	18720	150	580	580	50
Totals.	10	200	4000	54	450	24800	900	6950	208500	208500	26	1300	2080	36	14400	267110	1925	126000	5980	550
Other Counties.																				
6 King's.	1	20	300	2	150	6000	300	650	20000	15000	1	50	80	1	400	2600	340	1000	1000	90
7 Queen's	1	20	300	2	200	2400	400	830	25000	12500	1	50	80	1	400	2600	340	1000	1000	90
8 Sunbury	1	40	800	4	60	1200	120	400	12000	6000	1	50	80	1	400	2600	340	1000	1000	90
9 York.	1	20	300	2	110	2200	220	200	6000	4000	1	50	80	1	400	2600	340	1000	1000	90
10 Carleton.	1	20	300	2	35	350	70	20	500	375	1	50	80	1	400	2600	340	1000	1000	90
11 Victoria.	1	20	300	2	90	500	180	71	1500	750	1	50	80	1	400	2600	340	1000	1000	90
Totals.	2	60	100	6	645	12650	1290	2171	65000	38625	26	1300	2080	36	14400	267110	1925	126000	5980	550
Totals.	12	260	5100	60	1095	37450	2190	9121	273500	247125	26	1300	2080	36	14400	342810	2595	126000	5980	550

SESSIONAL PAPER No. 22

RETURN showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	DISTRICTS.	KINDS OF FISH.															TOTAL VALUE OF ALL FISH. \$ cts.	Number.				
		Cod tongues and sounds, brls.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lbs.	Hake, dried, cwt.	Pollock, cwt.	Trout, lbs.	Shad, brls.	Fresh shad, lbs.	Alewives or gaspereau, brls.	Smoked alewives, lbs.	Bass, lbs.	Pickarel, lbs.	Eels, brls.	Sardines, brls.	Bait (alewives), brls.			Coarse and mixed fish, brls.	Fish oil, galls.		
1	St. John County.	St. John Harbour	690	740000	580			480		8000	165000			85		3000				138,115 00	1	
2		Dipper Harbour	4 3220		5180			20													37,295 00	2
3		Pisarinco		400		600			25		300								1000		28,958 00	3
4		Musquash		300		325			50		100					4000	2000				21,975 25	4
5		St. Martin's		400		450	20		20		200						600				12,292 50	5
		Totals	4 4920	740000	7135	20		595		8600	165000				85	4000	5600		1000	238,635 75		
	Other Counties.																					
6		King's			750		20000	410	500	375	1800	10000	27000	30				200	220	*21,174 50	6	
7		Queen's					7500	650	200	1350	1600		60000	50				50		17,102 00	7	
8		Sunbury					1500	70	350	900	1300		27000	18				45		6,871 00	8	
9		York					20000	350	1000	450	1900		25000	10				120		+16,278 00	9	
10		Carleton					12000	35	800	100	1500		10000	20				40		4,440 00	10	
11		Victoria					17000	50		20	1300		6000	10				160		4,106 00	11	
		Totals			750		78000	1565	2850	3195	9400	10000	155000	138			615	220	60,971 50			
		Grand totals	4 4920	740000	7885	20	78000	2160	2850	11795	174400	10000	155000	223	4000	5600	615	1220	308,607 25			

* In No. 6 include 12,000 lbs. sturgeon and 7 kegs caviare.
+ In No. 9 include 25,000 lbs. perch.

RECAPITULATION

Of the Yield and Value of the Fisheries in District No. 3, New Brunswick, for the Year 1899.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Fresh salmon.....	Lbs.	342,810	0 20	68,562 00
Herring, salted	Brls.	2,595	4 00	10,380 00
" smoked.....	Lbs.	126,000	0 02	2,520 00
White perch.....	"	25,000	0 05	1,250 00
Lobsters, alive or in shell.....	Cwt.	5,980	5 00	29,900 00
Cod.....	"	550	4 00	2,200 00
Tongues and sounds.....	Brls.	4	10 00	40 00
Haddock	Cwt.	4,920	3 00	14,760 00
Smoked finnan haddies.....	Lbs.	740,000	0 06	44,400 00
Hake.....	Cwt.	7,885	2 25	17,741 35
Pollock.....	"	20	2 00	40 00
Trout.....	Lbs.	78,000	0 10	7,800 00
Shad.....	Brls.	2,160	10 00	21,600 00
" fresh.....	No.	2,850	0 10	285 00
Alewives	Brls.	11,795	4 00	47,180 00
Bass.....	Lbs.	10,000	0 10	1,000 00
Pickarel.....	"	155,000	0 05	7,750 00
Eels.....	Brls.	223	10 00	2,230 00
Sardines.....	"	4,000	1 50	6,000 00
Sturgeon.....	Lbs.	12,000	0 07	840 00
Caviare.....	Kegs	7	35 00	245 00
Smoked alewives.....	Lbs.	174,400	0 02	3,488 00
Bait	Brls.	5,600	3 00	16,800 00
Coarse and mixed fish.....	"	615	2 00	1,230 00
Fish oil	Galls.	1,220	0 30	366 00
Total for 1899.....				308,607 25
" 1898				276,580 65
Increase in 1899				32,026 60

RECAPITULATION

Of Number and Value of Vessels, Boats, Nets, Traps, &c., engaged in the Fisheries in District No. 3, New Brunswick, in the Year 1899.

Materials.	Value.	Total.
	\$	\$
12 fishing vessels (260 tons).....	5,100	
1,095 fishing boats	37,450	
273,500 fathoms of gill-nets.....	247,125	
26 seines (1,300 fathoms).....	2,080	
384 trawls.....	19,200	
36 weirs.....	14,400	
		325,355
13,200 Lobster traps.....	13,200	
105 canoes.....	1,050	
59 ice-houses.....	8,700	
112 smoke and fish houses.....	43,700	
73 piers and wharfs.....	39,100	
8 steamers and smacks.....	4,000	
		96,550
Total		435,105

SESSIONAL PAPER No. 22

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of all Fishing Materials, &c., used in the Fishing Industry in the whole Province of New Brunswick, for the Year 1899.

COUNTIES.			FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.												
			Vessels.			Boats.			Gill Nets.			Seines.		Trawls.		Weirs.		Smelt Nets.		Hand Lines.	
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1	28	500	5	226	4700	400	121	25700	27000												
2	208 2342	91500	810	1745	50200	3290	3900	235000	117300												
3	54	1900	14	690	22200	1070	2120	168000	147000												
4	1 20	500	3	1115	36000	1850	3500	178000	47500												
5				793	24800	1606	1520	63600	24200												
6				4	200	8	10	1800	1000												
7	10 200	4000	54	450	24800	900	6950	208500	208500	26	1300	2080	384	19200	36	14400					
8				150	6000	300	650	20000	15000												
9	1 20	300	2	200	2400	400	830	25000	12500												
10	1 40	800	4	60	1200	120	400	12000	6000												
11				110	2200	220	200	6000	4000												
12				35	350	70	20	500	375												
13				90	500	180	71	1500	750												
14	50 936	18950	239	1075	90442	1429	668	17962	5970	322	9379	21636	611	5545	344	142850	5	32	1290	786	14
Totals			276 3640	118450	1131 6743	265992	11843	20960	963562	617095	348	10679	23716	1220	26295	380	157250	2229	105732	5745	3421

NOTE.—In No. 2 add 2 trap-nets, \$3,000.

RECAPITULATION showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fish, &c.—
New Brunswick—Continued.

Number.	COUNTIES.	LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.								KINDS OF FISH.							
		Canneries.		Traps.		Number of hands employed.	Freezers and Ice Houses.		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Smacks.		Salmon, fresh, lbs.	Salmon, preserved in cans, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	
		Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.									
1	Restigouche	2	1300	3500	3100	77	13	9000	3	500	1	200	4	3500	140000	8200	1400	3000	3000	29000	1
2	Gloucester	64	50500	82300	78000	1710	56	15900	115	17400	9	6000	22	3500	358000	8200	83000	150000	150000	30000	22
3	Northumberland	13	14900	14000	12000	340	51	22500	130	12500			18	5000	370000		8020	11000	10000	45000	3
4	Kent	58	21500	48500	43000	925	15	7200	27	3300	22	880	3	8000	19800	8400	31200	50000	50000		4
5	Westmorland	72	41850	61800	56100	1742	3	15000	109	2600	3	300			9500		60100	50000	50000	7400	5
6	Albert								1	30					3500		300	2000			6
7	St. John			13200	13200		30	6000	66	40900	73	33100	8	4000	267110		1925		126000		7
8	King's						9	1200	15	750					25000		650				8
9	Queen's						10	500	20	1000					4000						9
10	Sunbury						5	250	6	300					3700						10
11	York						5	750	5	750					30000						11
12	Carleton														8000						12
13	Victoria														5000		20				13
14	Charlotte	7	16400	17702	16097	383	7	15800	749	134055	230	40625	11	9700	2900		7931	20130000	8669775	1050	14
Totals..		216	145550	241002	221497	5177	204	80600	1246	214085	347	87105	66	33700	1246510	8200	194546	20396000	8885775	325450	

NOTE.—§ Lbs. smoked. + In No. 4 add 40 brls. of mackerel.

SESSIONAL PAPER No. 22

RECAPITULATION showing the Quantity and Value of Fish, &c.—New Brunswick—Continued.

Number.	COUNTIES.	KINDS OF FISH.														Number.	
		Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked in nan haddies, lbs.	Hake, dried, cwt.	Hake sounds, lbs.	Pollock, cwt.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.		Alewives or gaspereau, brls.
1	Restigouche	26000	220	140	130	...	...	...	4300	7000	...	47000	10500	...	597200	...	1
2	Gloucester	686700	650	76400	130	...	500	...	...	...	...	...	25000	30	1142000	1300	2
3	Northumberland	107200	200	1850	...	...	100	...	300	...	...	3000	29000	1600	2750000	2100	3
4	Kent	443110	500	2010	6	...	200	...	1780	2640	...	2400	16600	130	1640000	2885	4
5	Westmorland	808400	1290	170	...	...	...	...	...	...	40	...	10700	2350	890000	1400	5
6	Albert	...	...	100	...	...	4920	...	40	...	...	...	8500	300	3500	...	6
7	St. John	...	5980	550	4	...	...	740000	7135	...	20	...	20000	410	...	8600	7
8	King's	...	...	...	...	...	...	...	750	...	...	...	7500	650	...	375	8
9	Queen's	...	...	...	...	...	...	...	...	...	...	...	1500	70	...	1350	9
10	Sunbury	...	...	...	...	...	...	...	...	...	...	...	20000	350	...	900	10
11	York	...	...	...	...	...	...	...	...	...	...	...	12000	35	...	450	11
12	Carleton	...	...	...	...	...	...	...	...	...	...	...	17000	450	...	100	12
13	Victoria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	420	13
14	Charlotte	105696	11125	5010	...	781000	1255	{ 24000 } { 316050 }	14397	10551	22980	20000	10500	...	11100	262	14
Totals		2177106	19965	87230	140	781000	6975	1080050	28702	20191	23040	72400	188800	6570	7033800	19742	

NOTE.—* Canned. † See page 130.

RECAPITULATION showing the Quantity and Value of Fish, &c.—New Brunswick—Concluded.

KINDS OF FISH.															
Number.	COUNTRIES.	KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.		
		Bass, lbs.	Clams, brls.	Belts, brls.	Sardines, cans.	Oysters, brls.	Flounders, lbs.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.
1	Restigouche			80			33000	22500				600	120		1
2	Gloucester	35000	1300	680		1070	28000	170000			24350	22300	35000	40	2
3	Northumberland	263000	400	370	256000	10590	27000	1150000			400	5000	12000		3
4	Kent	20000	11400	730		5420	29500	310000	18	1580	1740	7400	10900	16	4
5	Westmoreland	9000	420	170		260		28000		1500	200	34000	30000		5
6	Albert	400		35				32000		50	50				6
7	St. John			85	+4000						1000	5600			7
8	King's	10000		30						200	220				8
9	Queen's			50						50					9
10	Sunbury			18						45					10
11	York			10						120					11
12	Carleton			20						40					12
13	Victoria			10						160					13
14	Charlotte		3579		{ +213921 } { 1005000 }		7900	1100	160	125	27770	11295	7030	9	14
Totals		337400	{ 17099 } { *39600 }	2288	{ + 217921 } { * 1261000 }	17250	125400	1713600	178	4750	55730	86195	95050	65	

NOTE: - ‡ From No. 8 to 13 include 2,850 fresh shad and 155,000 lbs. of pickerel, 1,200 lbs. of sturgeon and 9,400 lbs. smoked alewives. * Canned. † Brls.

SESSIONAL PAPER No. 22

RECAPITULATION

Of the Yield and Value of the Fisheries of the whole Province of New Brunswick,
for the Year 1899.

Kinds of Fish.		Quantity.	Price.		Value.	Total Value.
			\$	cts.	\$ cts.	\$ cts.
Cod, dried.....	Cwt.	87,230	4	00	348,920 00	
Cod tongues and sounds..	Brls.	140	10	00	1,400 00	
						350,320 00
Haddock, dried.....	Cwt.	6,975	3	00	20,925 00	
" fresh.....	Lbs.	781,000	0	03	23,430 00	
" smoked (finnan haddies).....	"	1,080,050	0	06	65,763 00	
						110,118 00
Hake, dried.....	Cwt.	28,702	2	25	64,579 50	
" sounds.....	Lbs.	20,191	0	50	10,095 50	
						74,675 00
Pollock.....	Cwt.	23,040	2	00		46,080 00
Tom cod or frost fish.....	Lbs.	1,713,600	0	05		85,670 00
Halibut.....	"	72,400	0	10		7,240 00
Flounders.....	"	125,400	0	05		6,270 00
Salmon, fresh.....	"	1,246,510	0	20	249,302 00	
" preserved in cans.....	"	8,200	0	15	1,230 00	
" smoked.....	"	400	0	20	80 00	
						250,612 00
Trout.....	"	188,800	0	10		18,880 00
Smelts.....	"	7,033,800	0	05		351,690 00
Herring, salted.....	Brls.	194,546	4	00	778,184 00	
" fresh.....	Lbs.	20,396,000	0	01	203,960 00	
" smoked.....	"	8,885,775	0	02	177,715 50	
" kippered.....	"				36,120 00	
						1,195,979 50
Sardines.....	Brls.	217,921			433,842 00	
" preserved.....	Cans.	1,261,000	0	05	63,050 00	
						496,892 00
Shad.....	Brls.	6,598	10	00		65,985 00
Alewives.....	"	20,614	4	00		82,456 00
Eels.....	"	2,288	10	00		22,880 00
Perch.....	Lbs.	25,000	0	05		1,250 00
Pickarel.....	"	158,000	0	05		7,900 00
Sea-Bass.....	"	337,400	0	10		33,740 00
Mackerel.....	Brls	40	15	00	600 00	
" fresh.....	Lbs.	325,450	0	12	39,054 00	
						39,654 00
Sturgeon.....	"	12,000	0	07	840 00	
" caviare.....	"	490			245 00	
						1,085 00
Oysters.....	Brls.	17,250	4	00		69,000 00
Clams.....	"	17,099			41,671 00	
" preserved.....	Cans.	39,600	0	10	3,960 00	
						45,631 00
Squid.....	Brls.	178	4	00		712 00
Lobsters preserved in cans.....	Lbs.	2,177,106	0	20	435,421 20	
" fresh or alive.....	Cwt.	19,965	5	00	99,825 00	
						535,246 20
Scallops.....	Lbs.	27,400				3,870 00
Coarse and mixed fish.....	Brls.	4,750				9,500 00
Seal skins.....	No.	65				106 00
Dulse.....	Lbs.	75,051				4,503 00
Fish oil.....	Galls.	55,730	0	30		16,719 00
Fish as bait.....	Brls.	86,195	1	50		137,692 50
Fish as manure.....	"	95,050	0	50		47,525 00
Total for the year 1899.....						4,119,891 20
" " 1898.....						3,849,357 40
Increase.....						270,533 80

RECAPITULATION

Of the Vessels, Boats, Nets, and all Fishing Material used in the whole Province of
New Brunswick, for the Year 1899.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
276 fishing vessels (3,640 tons).....	118,450 00	
6,743 fishing boats.....	265,992 00	
20,960 gill-nets (963,562 fathoms).....	617,095 00	
348 seines (10,679 fathoms)....	23,716 00	
2 trap-nets.....	3,000 00	
380 weirs....	157,250 00	
2,229 smelt nets.....	105,732 00	
350 bass nets.....	1,500 00	
1,220 trawls.....	26,295 00	
5,745 hand lines.....	3,421 00	
		1,322,451 00
216 lobster canneries.....	145,550 00	
241,002 " traps.....	221,497 00	
		367,047 00
204 freezers and ice-houses.....	80,600 00	
1,246 smoke and fish-houses.....	214,085 00	
5 sardine canneries.....	41,000 00	
2 clam canneries.....	600 00	
4 fish curing factories.....	7,000 00	
1 fish guano do.....	5,000 00	
66 tugs or smacks.....	33,700 00	
347 fishing piers and wharfs.....	87,105 00	
730 smelt fishing shanties.....	10,950 00	
25 fish presses.....	2,800 00	
80 weir scows.....	4,000 00	
55 pile drivers.....	4,500 00	
105 fishing canoes.....	1,050 00	
		492,390 00
Total		2,181,888 00

Number of Persons Employed in the New Brunswick Fisheries :—

Men in fishing vessels.....	1,131
" boats.....	11,843
Persons in lobster canneries.....	5,171
Total.....	18,145

SESSIONAL PAPER No. 22

APPENDIX No. 5.

PRINCE EDWARD ISLAND.

REPORT ON THE FISHERIES OF PRINCE EDWARD ISLAND FOR 1899,
BY INSPECTOR OF FISHERIES J. A. MATHESON.

CHARLOTTETOWN, P.E.I., January 2, 1900.

HON. SIR LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my annual report on the fisheries of the Province of Prince Edward Island for the year 1899, together with tabulated returns, showing the respective quantities and values of each kind of fish caught, and the amount of capital employed in the different fisheries.

The figures for the last two years are as follows :—

Total value of fisheries of 1898.....	\$1,070,206
“ “ 1899.....	1,043,645
Decrease.. ..	<u>\$26,561</u>

LOBSTERS.

This fishing commenced later than in the past few years, owing to the fact that the ice remained on the coast longer than usual.

Very little was done before the 10th day of May.

The fishing was very good up to the 15th, when a heavy storm destroyed a large number of traps and rope, with the result that very few fish were taken for the following five days, and, as a consequence, the total catch was materially lessened.

In Prince County between Cape Traverse and West Point, an extension was given as recommended by the Fishery Commission, but at the close of the season the average quantity had not been taken.

In Queen County the catch was about an average one, while that in King County was in excess of last year.

HERRING.

Herring struck in about the first week of May, in some parts of the province quite plentifully, while in others scarcely enough were procured for local consumption, and for lobster bait, these being their principal uses.

COD.

This branch of the industry is principally prosecuted in small boats, and when bait can be procured, fishermen generally make good wages, the prices being fair and fish plentiful. This season may be called a good one. The assistance given by the department in establishing cold storage for bait is looked upon by the fishermen and others,

64 VICTORIA, A. 1901

engaged in the cod and hake fishery, as commencing a new era in this staple industry. In no way could the fishermen receive a greater benefit than by being able to easily procure supplies of bait, when needed ; and more especially while the present scarcity of mackerel continues, as, on this latter fishing, they formerly relied chiefly for their bait.

Hake fishing was good and the yield increased especially in King County.

MACKEREL.

Mackerel still continue to be scarce in this province. In Queen County, very few were taken, except with nets. In King County, especially at Morell, St. Peters and North Lake, the catch was fair. Schools of small mackerel have been noticed this season, and our fishermen are hoping that these fish may soon return to our waters.

OYSTERS.

The catch in this year's oyster fishing was smaller than that of last season's, the greatest shortage being in Queen County. Last year more than an average catch was taken, partially owing to the fact that North River had been closed for the two years previous. No doubt, the extra catch in 1898 accounts, in a measure, for the shortage of the present year.

The greatest difficulty was encountered in former years in preventing the taking and shipping of undersized fish. This year, special guardians were appointed and stationed at the different landings with beneficial results. The shippers appreciate the move very much, and say it will do more to protect the industry and will benefit the fishermen and shippers to a greater extent than any other means previously adopted.

A boat cruised continuously on Richmond Bay during the season, so as to allow no opportunity for the use of drags. The results have been satisfactory and few, if any, fish have been taken in this way.

SMELTS.

The catch was not so large as in former years, but prices remained good throughout the season, and fishermen were enabled to obtain a livelihood during the winter by this industry.

TROUT.

In most of our streams and brooks this fish can be caught quite plentifully and there is no danger of exhausting this fishing, while it is confined to angling.

Respectfully submitted,

J. A. MATHESON,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

PRINCE EDWARD ISLAND.

Return showing the Number, Tonnage and Value of Vessels and Boats, Nets and the Quantity of Fish caught in the Province of Prince Edward Island, for the year 1899.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.						
	Vessels.			Boats.			Gill Nets.			Trawls.			Herring, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Number.	
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Value.							
DISTRICTS.																			
King County.																			
1	Souris and Red Point.....	1	15	200	3	105	2100	150	325	6500	2000	225	2750	2500	20000	50	67776	3000	20
2	Bay Fortune.....	...	...	...	...	55	1100	75	175	3600	1200	45	540	2000	15000	20	35448	750	8
3	Annandale. ....	...	...	...	...	130	3000	340	400	7000	2500	30	350	3000	15000	25	130320	650	3
4	Georgetown.....	1	30	600	4	40	1100	75	120	2400	800	35	300	4000	40000	15	58032	600	8
5	Murray Harbour, north....	4	180	3000	16	80	3200	165	300	6000	2000	90	1000	2000	...	25	119232	800	5
6	" " south.....	8	360	5000	40	145	2000	200	300	6000	2000	110	1200	4000	...	60	76648	5000	35
7	Morell and St. Peter's	1	30	600	5	105	3000	300	650	13000	4500	50	500	3500	...	485	126020	1500	20
8	Naufrage.....	...	...	...	...	75	800	150	225	4500	1500	30	350	1500	...	100	68064	1000	...
9	North Lake.....	...	...	...	...	70	900	150	300	6000	2000	30	300	1500	...	650	54336	1500	...
10	East Lake. ....	...	...	...	...	35	500	65	160	3000	1000	30	300	1000	...	70	42384	700	...
	Totals.....	15	615	9400	68	840	17700	1670	2955	58000	19500	675	7590	8000	90000	1500	778260	15500	91
	Values.....	...	...	...	...	...	...	...	...	...	...	...	...	1600	900	22503	155652	62000	910

RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	DISTRICTS.	KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.					
		Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Clams, brls.	Eels, brls.	Caplin, brls.			Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, tons.
King County.																		
1	Souris and Red Point	100	3000	6000	1000	1500	1000		30	8	500	3000	60	50	3200	2000	900	54,355 20
2	Bay Fortune	40	1200	3000	200	4000	5000		15	8	50	2500	75	20	1000	400	90	25,379 60
3	Annandale	20	800	1500		4000	3000		10	6		3500	150	35	700	1800	900	49,104 00
4	Georgetown		500	1200		1500	1500						40		600	850	486	34,756 40
5	Murray Harbour, north.		1000	2000		1000	1000		10	10		8000	40		900	1800	720	43,211 40
6	" south		6000	12000			3000			15		3000	100	100	5000	2000	600	78,229 60
7	Morell and St. Peter's	150	200	500		15000	20000		15	20		4000	50		900	2200	750	62,909 00
8	Naufrage	200	200	400		5000				5		5000	30	10	500	1200	450	29,702 80
9	North Lake	150	300	600	1000	6000	2000	250		15		4000	30	10	750	600	350	37,807 20
10	East Lake	150				3000	1500	30	30	10		1200	15	10	350	550	250	18,811 80
Totals		810	13200	27200	2200	41000	38000	280	110	97	550	34200	590	235	13900	13400	5490	434,267 00
Values		2430	29700	13600	220	4100	1900	1120	440	970	1925	1710	2360	470	4170	20100	5490	

Return showing the Number, Tonnage and Value of Vessels and Boats, &c.—Prince Edward Island—Continued.

SESSIONAL PAPER No. 22

Number.	DISTRICTS.										FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.						KINDS OF FISH.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	Vessels.					Boats.					Gill Nets.			Seines.			Trap Nets.		Herring, salted, brls.	Herring, fresh, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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RETURN showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	DISTRICTS.	KINDS OF FISH.																	TOTAL VALUE OF ALL FISH.	Number.				
		Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Haddock, smoked fin- nan haddies, lbs.	Hake, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alwives or Gaspereau, brls.	Clams, brls.	Eels, brls.	Oysters, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, tons.	Seal skins, number.	
1	Tracadie.....	1100	20	1000	50	...	...	...	40000	500	...	100	2400	...	...	...	...	300	...	200	...	...	39,857 60	1
2	New London.....	350	10	...	20	...	20	1000	500	4500	30	10	50	...	...	...	...	100	1500	90	...	...	20,970 00	2
3	Point Prim.....	100	10	500	50	200	200	...	1000	200000	...	200	450	500	...	20	10	100	50	200	10	...	36,657 00	3
4	Rustico and Cove Head.....	2500	30	...	...	...	...	...	1000	15000	50	50	...	...	...	40	...	1000	800	160	...	...	54,964 80	4
5	Wheatley River.....	1200	...	...	...	...	...	...	300	6000	...	25	30	...	...	...	...	90	...	...	...	...	5,957 00	5
6	Pownal.....	...	...	...	...	...	...	...	2000	20000	...	...	100	...	...	...	...	...	...	100	...	...	6,778 40	6
7	Charlottetown.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,200 00	7
8	Crapaud.....	...	...	...	...	...	...	...	...	60000	...	...	...	...	...	...	...	...	500	150	...	...	8,020 00	8
9	Lot 65.....	...	...	...	...	...	...	...	5000	300000	500	150	100	1000	...	...	...	...	500	300	...	...	31,522 80	9
10	Bays and Rivers.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25,200 00	10
Totals.....		5250	70	1500	120	200	220	1000	9800	645500	1080	225	495	6000	500	60	10	1590	3350	1200	10	...	230,127 60	
Values.....		\$ 21000	700	45	560	12	495	100	980	32275	4320	900	4950	24000	25	240	20	477	5025	1200	20	...	230,127 60	

RETURN showing the Number, Tonnage and Value of Vessels and Boats, &c.—Prince Edward Island—Continued.

SESSIONAL PAPER No. 22

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.												
	Vessels.		Boats.		Gill Nets.			Seines.			Herring, salted, brls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, fresh, lbs.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Number.					
	Number.	Tonnage.	Value.	Men.	Number.	Value.	Fathoms.	Value.	Number.	Fathoms.									Value.	Number.	Value.		
Prince County.																							
1	Tignish	2	72	2100	11	96	5100	228	90	11025	650	6	750	600	2	2000	1400	10000	60	109151	1		
2	Alberton					36	2050	73	83	1660	400	2	400	1000					119	57632	2		
3	Lot 11					25	685	43	33	2470	178									37080	3		
4	Narrows	1	10	300	4	15	750	40	45	900	225						1200	500		28000	4		
5	Grand River					13	260	26	8	400	205						20000			26688	5		
6	Richmond Bay	1	10	300	3	120	1800	180									100	600	6	2000	6		
7	Summerside					4	100	8													7		
8	Travellers' Rest					100	2000	200	3	30	12						100				8		
9	Carleton					29	1240	52	48	964	140									78864	9		
10	Tryon					46	1380	90	80	1600	200									126520	10		
11	Malpeque					90	3000	180	200	1800	1600	1	120	300			500			20000	11		
12	Egmont Bay					125	5712	248	175	3195	863									365472	12		
13	Brae and West Point					49	1808	128	180	1140	740								9	23072	13		
14	Miminigash	1	17	450	5	42	1765	87	190	3330	806						1355	800	71	48549	14		
15	Nail Pond					69	2970	142	123	2470	1075	3	1350	1200			1030	2592	124	79300	15		
16	Skinner's Pond					35	630	57	55	950	265						200		1	56288	16		
17	Brae to Higgins' Wharf					19	900	37	30	600	75									38400	17		
18	Rivers of lots 5 and 6					5	100	12	7	155	44						112				18		
Totals		5	109	3150	23	918	32250	1831	1350	32989	7478	12	2620	3100	2	2000	5497	20800	600	13892	390	1096936	34
Values																	21988	208	12	1667	5850	219387	170

Return showing the Kinds and Quantities of Fish and Fish Products, &c.—Prince Edward Island—Continued.

Number.	DISTRICTS.										KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.										
	Prince County.										Cod, dried, cwt.	Haddock, fresh, lbs.	Haddock, dried, cwt.	Hake, dried, cwt.	Hake sounds, lbs.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Alewives or gaspereau, brls.	Bass, lbs.			Eels, brls.	Oysters, brls.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, tons.			
1	Tignish.										1600																			46,105	20	
2	Alberton										80																			22,266	40	
3	Lot 11																													9,357	00	
4	Narrows										100	1500		50																17,917	50	
5	Grand River										20																			13,345	00	
6	Richmond Bay.										100																			18,269	00	
7	Summerside																													1,420	00	
8	Travellers' Rest.																													16,050	00	
9	Carleton																													18,757	80	
10	Tyron.										400			40																27,799	00	
11	Malpeque.																													15,070	00	
12	Edmont Bay.																													78,059	40	
13	Brae and West Point.										1600																				14,923	40
14	Mimmigash.										733			487	1191															22,414	35	
15	Nail Pond.										719		50	160																30,432	54	
16	Skinner's Pond										215			30	75															13,212	10	
17	Brae to Higgins' Wharf.																													11,550	00	
18	Rivers of lots 5 and 6.										105																			2,301	30	
Totals.											5672	1500	50	1267	9266	500	550	259200	46	100	202	12236	36	605	3442	21228	1150					
Values.										\$	22688	45	150	2850	4633	50	55	12960	184	10	2020	48944	144	1210	1032	31842	1150				379,250	

SESSIONAL PAPER No. 22

RECAPITULATION by Counties showing the Number, Tonnage and Value of Vessels and Boats and the Quantity and Value of Fishing Materials and other Fixtures used in the Fishing Industry in the Province of Prince Edward Island for the Year 1899.

FISHING VESSELS AND BOATS.										FISHING GEAR OR MATERIALS.																								
Vessels.					Boats.					Gill Nets.					Seines.					Trap Nets for Perch.					Trawls.					Dip Nets.				
Number.			Tonnage.		Value.		Men.		Number.		Value.		Men.		Number.		Fathoms.		Value.		Number.		Value.		Number.		Value.		Number.		Value.			
1 King.....			15	615	9400	\$	68	84	17700	1670	2955	58000	19500	\$	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2 Queen.....			1	17	400		7	595	13200	1154	497	10865	2891		6	1020	900	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 Prince.....			5	109	3150		23	918	32250	1831	1350	32984	7478		12	2620	3100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....			21	741	12950		98	2353	63150	4655	4802	101854	29869		18	3640	4000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

LOBSTER PLANT.										OTHER FIXTURES USED IN FISHERIES.																							
FISHING GEAR OR MATERIAL.					Traps.					Freezers and Ice Houses.					Smoke and Fish Houses.					Piers and Wharfs.					Tugs Steamers and Smacks.								
Smelt Nets.		Hand Lines.		Number of hands employed.	Number.		Value.			Number.		Value.			Number.		Value.			Number.		Value.			Number.		Value.			Number.		Value.	
1 King.....		55	275	2440	\$	2440	55	35685	90680	55381	775	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2 Queen.....		101	2585	600		350	67	29750	67000	32500	955	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 Prince.....		106	2520	1508		383	118	29795	125434	60484	1446	2	200	42	1552		16	44595	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals..		262	5380	4548		3173	240	95230	283114	148365	3176	2	200	49	1702		33	47670	1	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

SESSIONAL PAPER No. 22

RECAPITULATION.

SHOWING Yield and Value of the different Fisheries in the Province of Prince Edward Island, during the Year 1899.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Salmon, smoked.....	Lbs.	8,000	0 20	1,600 00
Herring, salted.....	Brls.	34,797	4 00	139,188 00
" fresh.....	Lbs.	134,800	0 01	1,348 00
" smoked.....	"	600	0 02	12 00
Mackerel, fresh.....	"	20,092	0 12	2,411 04
" salted.....	Brls.	2,260	15 00	33,900 00
Lobsters, preserved in cans.....	Lbs.	2,421,144	0 20	484,228 80
" fresh.....	Cwt.	46	5 00	230 00
Dried cod.....	"	26,422	4 00	105,688 00
Tongues and sounds.....	Brls.	161	10 00	1,610 00
Fresh haddock.....	Lbs.	3,000	0 03	90 00
Dried ".....	Cwt.	980	3 00	2,940 00
Smoked finnan haddies..	Lbs.	200	0 06	12 00
Hake, dried.....	Cwt.	14,687	2 25	33,045 75
" sounds.....	Lbs.	36,466	0 50	18,233 00
Halibut.....	"	3,700	0 10	370 00
Trout.....	"	51,350	0 10	5,135 00
Smelts.....	"	942,700	0 05	47,135 00
Gaspereau.....	Brls.	1,406	4 00	5,624 00
Clams.....	"	335	4 00	1,340 00
Bass.....	Lbs.	100	0 10	10 00
Eels.....	Brls.	794	10 00	7,940 00
Caplin.....	"	550	3 50	1,925 00
Oysters.....	"	18,236	4 00	72,944 00
Tom cod.....	"	34,700	0 05	1,735 00
Squid.....	Brls.	686	4 00	2,744 00
Coarse and mixed fish.....	"	850	2 00	1,700 00
Fish oil.....	Galls.	18,932	0 30	5,679 60
Fish for bait.....	Brls.	37,978	1 50	56,967 00
" as manure.....	Tons.	7,840	1 00	7,840 00
Seal skins.....	No.	10	2 00	20 00
Total for 1899.....				1,043,645 19
Total for 1898.....				1,070,206 70
Decrease.....				26,561 51

RECAPITULATION.

SHOWING the Number and Value of Vessels, Boats, Nets, Lobster Canneries, Traps, &c., used in the Fisheries of the Province of Prince Edward Island, Season, 1899.

Articles.	Value.	Total Value.	Articles.	Value.	Total Value.
	\$	\$		\$	\$
21 vessels, 741 tons.....	12,950		240 lobster canneries.....	95,230	
2,353 boats... ..	63,150		283,114 lobster traps.....	148,365	
4,802 gill-nets, 101,854 fathoms	29,869				243,595
18 seines 3,640 fathoms	4,000		2 freezers and ice-houses..	200	
157 trap-nets for perch.....	3,440		49 smoke and fish-houses...	1,702	
780 rawls	8,741		33 piers and wharfs.....	47,670	
155 dip-nets.....	300		1 steamer.....	500	
262 smelt-nets.....	5,380				50,072
4,548 hand lines.....	3,173				
		131,003	Total value.....		424,670

Number of persons employed in the fisheries of P.E.I.—

Men in fishing vessels.....	98
" " boats.....	4,655
Persons in lobster canneries	3,176
Total.....	7,929

SESSIONAL PAPER No. 22

APPENDIX No. 6.

MANITOBA.

REPORT ON THE FISHERIES OF MANITOBA FOR 1899, BY INSPECTOR
F. W. COLCLEUGH.

SELKIRK, January 15, 1900.

Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to report as follows on the fisheries of Manitoba for the year 1899, and to inclose herewith statistical returns for the same period.

This season, in the matter of catch and all other respects, may be said to have been an average one, some lakes showing an increase in output, and others a proportionate decrease.

In *Lake Winnipegosis* and Dauphin District the catch was more than double what it was the preceeding year. This is accounted for to some extent by the large influx of population to this particular part of the province, following the construction of the Manitoba Northern into the Swan River country. The extension of this road to the north last season so increased the transport facilities, that quite an impetus was given to the fishing industry in the northern part of Lake Winnipegosis, which had never been fished before to any extent, and in which fish were abundant.

Many of the new comers found profitable employment during the winter, assisting in fishing, freighting fish to the railway track, and otherwise. And all fishermen did well, as competition among the several buyers was keen, and prices consequently high.

It was in this locality (Whisky Jack Harbour) where I secured the supply of ova for the hatchery here last year, and I found whitefish more abundant than I had ever seen in any other waters. I am therefore of opinion, that there is no danger from over-fishing in the northern parts of this lake for at least two years, and would recommend vigorous fishing for a year or two, with a view to testing the grounds, and improving the condition of the fish.

All fishing operations on Lake Winnipegosis this year have been successful and everybody made money. Fishing was most satisfactory, and as high as two and one-half cents per pound has been paid to the fishermen for whitefish by the rival buyers at this point.

The returns from this lake this year show a yield of over one and a quarter million pounds of whitefish alone and a total yield of nearly five and a quarter million lbs. of all kinds, valued at \$127,880. This is an increase on last year's business of \$74,680.

When one considers the figures in the preceding paragraph, it will be recognized that the fish of our lakes is one of the most valuable resources the country possesses, and will, if properly protected, prove an important factor in feeding the vast population, which will, in the near future, people this country.

One new tug has been built and placed for service on this lake this year, to be used in the transportation of fish and fishermen, and the season so far as weather is concerned, has been an average one, free from any disastrous storms, and no lives have been lost, excepting one poor fellow a half breed who fell off Capt. Coffey's tug the *Mocking Bird* and was drowned.

Late overseer Adam, of *Water-Hen River*, reports that fish are so plentiful in the north end of Lake Winnipegosis that 'nets left out only one night are found next morning so full of fish that they float on the top of the water.' He also reports that

during the summer 2½ cents per pound was paid to the fishermen for whitefish, and as high as 5 cents per pound was being paid in the latter part of December for winter caught whites. He also states that the regulations have been fairly well observed during the year in his district, and he closes his report by recommending, as a most valuable aid to fishermen and boatmen, that a small lighthouse be erected at the mouth of Mossoy River. Fishermen being out all day, and coming home at night often have difficulty in finding the mouth of the river, and sometimes are compelled to remain all night outside the mouth in a rolling sea, thus causing considerable discomfort, delay and sometimes serious loss of fish, should they be short of ice. I have experienced some of these inconveniences myself, and would add, that owing to the shallowness of the water, and tortuousness of the course, that some sort of a beacon is absolutely necessary, and should receive attention from the Department of Marine this coming season.

The supply of ova for the hatchery at Selkirk has been taken from Lake Winnipegosis for the past two years, and the fishermen as well as many of the settlers are of opinion that some portion of the fry should be taken back to that lake. I agree with the idea and some think that some whitefish fry could be planted in the southern portion of the lake to advantage.

Lake Manitoba.—The catch in these waters this season has been an average one, and operations have not increased from what they were the preceding year. Owing to the removal of Officer Martineau in October, and his successor not being appointed until the following February, I am without any report from the western portion of the lake, and have had to approximate the catch as accurately as possible.

This lake, while being large in area is shallow, and is not as good a home for whitefish as either Winnipegosis or Winnipeg, but abounds in fish of a predatory character, and many of the whitefish taken from these waters have a hump on their back, or an abscess on their side, or other evidence of a serious conflict with an enemy, from which they have escaped by flight.

Officer *H. Chartrand*, of St. Laurent, and *James Matheson*, of The Narrows of Lake Manitoba, both report close seasons and regulation generally well observed in their respective districts. They also report that the catch of this year would have been in excess of last, but for the mild and open winter militating against all fishing operations.

Lake Winnipeg.—Operations on the lake began about the usual time, there being no increase in any class of licenses excepting sturgeon, and no accidents during the season excepting two, one resulting in the loss of one man's life, and the other, in the loss of large quantities of supplies which were being taken out in the fall for winter fishing, and which were replaced in time to prevent any interruption of operations.

The number of tugs, amount of twine, and men engaged on this lake, were all less than last year, and the catch was proportionately less, there being a decrease of about one and one-half million pounds. The season was not favourable and considerable loss was sustained by the fish becoming unmarketable in the nets, on account of wind being too high to lift them at the proper time. This, of course, was unavoidable.

Sturgeon was very much sought after, and although there was considerable increase in the number of licenses to fish for them, there was a slight falling off in the catch. During the last half of the season the sturgeon fishing was very unprofitable, many of the fishermen not making more than half wages.

There was much dissatisfaction amongst the fishermen on this lake regarding prices paid by the only two buyers there, and quite a number forsook the lake and went elsewhere, most of them to Winnipegosis, where prices were much higher. Those remaining have, I understand, formed themselves into an association, and presented their grievances in the form of a very largely signed petition to your department, and are expecting redress this coming season.

In the vicinity of Big Island no whitefish had been caught for several years, but this summer quite a few had been taken, and the settlers on the island who caught them are of the opinion from the general smallness of the fish, that they have come from the hatchery, and for this reason I have since declined to recommend any pickerel or 4-inch mesh licenses in that locality.

SESSIONAL PAPER No. 22

The fish companies continue to move their plants northward, and this year their operations were carried on within a short distance of the northern shores of the lake, and I understand they contemplate another move to Norway House and Play Green Point on the northern coast. To my mind this is *prima-facie* evidence of the depletion of these waters. Fully ninety per cent of the catch of all our lakes goes to the United States, and finds a market there at good prices. Last spring I had a wholesale price list from the Detroit Fish Association, which, I am told, is one of the tentacles of the great American octopus, the fish combine, and this list quoted our whitefish at 8 cents per pound wholesale, and our sturgeon at from 9 to 14 cents, while fine dressed trout taken from eastern waters was only quoted at $5\frac{3}{4}$ cents.

The close seasons have been very well observed throughout the province, and those engaged in fishing seem to fully understand and appreciate that the regulations in this respect, have been framed entirely in their interests.

Officer Magnusson, of Arnes, on the western shore of Lake Winnipeg, reports a decrease in the catch of fish in his district, as compared with last season, and says that winter fishing was a failure. He reports close seasons and other regulations well observed in his district and closes his report as follows: 'In my opinion the lake will surely be depleted of fish in a few years if the companies are allowed to fish as at present.'

Officer Hughes, of Selkirk, reports having made a tour of his own district and a portion of that formerly under the custody and care of Mr. Leo Shannus, of Fort Alexander, but in which there is no officer at present, and finds the fishery laws and regulations well observed. The number of licenses in his district has increased from last year, but the yield of fish is less. He is also of opinion that the lake is being depleted.

Angus McKay, Esq., of Berens River, late Indian agent at that point, has resided there for over twenty years, and always taken a lively interest in all matters pertaining to the welfare of the community, and now writes stating that the lake is being rapidly depleted of both whitefish and sturgeon, and urges the government to pay heed to it before it is too late. I may add that this opinion is shared by all disinterested parties who have given this matter any consideration.

All of which is respectfully submitted.

I have the honour to remain, sir,
Your obedient servant,

F. W. COLCLEUGH,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

TOBA.

and Value of Fish caught in the Province of Manitoba, for the year 1899.

KINDS OF FISH.													VALUE.	Number.
Salted white fish, brls.	Whitefish, lbs.	Trout, lbs.	Pickrel, lbs.	Pike, lbs.	Sturgeon, lbs.	Caviare, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Gold eyes, lbs.	Home consumption, lbs.		
													\$ cts.	
120	1253000	10000	401000	1612000	.....	.....	10000	15000	.....	1600000	.....	300000	127,880 00	1
.....	250000	.....	151000	140000	.....	.....	.....	80000	.....	110000	.....	152000	24,050 00	2
.. . .	22500	.....	305900	151350	.....	.....	43900	141700	72600	174100	.. . .	120500	22,165 00	3
.....	171749	.....	298582	117908	265072	9857	17113	3248	52053	.....	25881	.....	43,222 32	4
.....	632355	.....	15076	.....	.....	.....	.....	.....	.....	.....	.....	.....	32,070 03	5
.....	444525	.....	8342	.....	.....	.....	.....	.....	.....	.....	.....	.....	22,476 51	6
.....	725391	.....	15858	.....	.....	.....	.....	.....	.....	.....	.....	.....	36,745 29	7
.....	.....	.....	.....	.....	179715	5888	.....	.....	.....	.....	.....	.....	13,726 90	8
120	3499520	10000	1195758	2021258	444787	15745	71013	239948	124653	1884100	25881	572500		
960	174976	500	35872	40425	26687	7872	1420	4798	3739	18841	517	5725	322,336 05	

APPENDIX No. 7.

NORTH-WEST TERRITORIES

REPORT ON THE FISHERIES OF THE NORTH-WEST TERRITORIES, FOR
THE YEAR 1899, BY INSPECTOR E. W. MILLER.

QU'APPELLE, N.W.T. January 2, 1900.

The Hon. Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit the following report on the fisheries of the North-west Territories for the year 1899, together with statistics of the catch of fish, value of gear, etc.

The winter fisheries in most districts were more than usually successful and in those of the larger whitefish lakes, where the fishing is both heavy and persistent, the enforcement of the close season has proved efficacious in preserving a full supply of fish.

South of the Saskatchewan River the number of those actually dependent on the fisheries for their livelihood, is steadily diminishing, and the most serious danger of the exhaustion of the fish supply is therefore passing. In the more settled districts the amount of fishing done depends largely on the call for labour in other occupations, and the general activity prevailing throughout the Territories in 1899 caused fewer people than usual to resort to fishing.

At many of the smaller lakes a substantial gain in depth of water was registered, caused by the heavy rainfall of the year. For the same reason, the rivers continued in high water for a much longer period than usual and the fish thus obtained much freer passage and access to waters from which they have been in some cases isolated for several years.

It was intended to restock some of the Assiniboian lakes with whitefish fry from the Selkirk hatchery, but unfortunately the fry fell into poor condition just prior to the time for shipment, and the superintendent of the hatchery considered it useless to attempt to send them so long a journey. No fry have therefore been planted in the Territories in 1899, but it is hoped that greater success will attend a trial next season.

Steps have been taken by the appointment of an overseer and two guardians, to bring the important fisheries of the lower Saskatchewan valley under control. The high price offered for sturgeon had led to a small export trade being opened up even with the disadvantage of the very long haul to a market: the extension of the Canada Northern Railway has now much reduced this, and with proper safeguards, a certain amount of fishing for the market can probably be done with benefit to the resident Half-breeds and Indians. The maintenance of an ample fish supply for food requirements is however, of paramount importance in this district under present conditions, and it is not desirable that any influx of outside fishermen intending to fish for commercial purposes should be encouraged.

I regret to report that no satisfactory solution has been arrived at in the matter of the protection of the western trout from the ravages of the irrigation ditches. Fortunately in the past year the rainfall has been so ample that many of the ditches have been disused and others run only a short time, so that the injury done has been slight in comparison to that to be expected in a dry season. The screens called for by the Regulations are only used in a few isolated instances.

SESSIONAL PAPER No. 22

Some trouble has been experienced with new settlers coming from foreign countries, who have taken fish out of season and by illegal methods. These offences however sprang more from ignorance of the regulations than from intentional wrong doing, and an explanation of the law has generally sufficed to prevent their repetition.

Satisfactory results have been obtained by the appointment of resident guardians at the more important of the detached Assiniboian lakes. Care has been taken to appoint men interested in the protection of the fish, and thus at a very small expense, the netting done in the spawning season by raiders from a distance, often to the indignation of the nearer settlers, has been practically ended.

SYNOPSIS OF THE REPORTS OF THE OVERSEERS AND GUARDIANS
IN THE DISTRICTS SPECIFIED.

PRINCE ALBERT.

Overseer Robertson reports a very much diminished catch in this district owing mainly to the entire abandonment of the fish export business. The lakes where this winter fishery was formerly carried on are situated from 70 to 80 miles from Prince Albert, in which immediate vicinity the fishermen live, and the latter claim that the fifteenth of December, when the season now opens, is too late for them to start, as export buying ceases about February 15, and so short a season does not enable them to make a fair winter's wage. Transportation charges are heavy and prices paid on the ice are two cents per pound for whitefish, $1\frac{1}{2}$ cents for trout, 1 cent for doré and pike.

Very little fishing was done in the Saskatchewan River, as both the North and South Branches continued very high throughout the summer and the current was too strong to permit of nets being set.

The overseer reports the fishery regulations to be now well understood and observed by both settlers and Indians, but the persistent fishing carried on at some of the smaller lakes in close proximity to Indian Reserves, has caused the supply of whitefish in particular to be much decreased. This is specially noticeable at Assiniboine and Sandy Lakes, both of which would be much benefited by a supply of fry.

No fishing is now being done at Candle, Big Trout, Little Trout and Dog Lakes, in which fishing for the export trade was formerly done. The whitefish here are specially good, and were found by the exporters to be the most marketable fish sent from the western lakes. Lake trout and pike are also very plentiful. The overseer is of opinion that as far as the supply of fish is concerned, a big catch could be made yearly without detriment to the fishery. The outlet from Candle Lake is a fine stream, about ninety feet wide, with scarcely any perceptible current except at a point about fifty miles from where it enters the Saskatchewan River. Here it breaks over a ledge of limestone rock in a fall of ten feet. The Indians have been in the habit of taking large numbers of sturgeon at this point in a rather novel method. Two nets are secured side to side, with poles fastened to the ends to be held on either side of the stream by three or four men. A platform as it were is thus formed for the fish to leap into as they come over the fall. When some have been taken the nets are shifted down the stream a little and the fish removed by canoe.

Montreal and Bittern Lakes were visited by *Guardian Anderson* in November. Fish had been found scarce in the former and the Indians had made their fall fishing at the latter lake before the beginning of the close season. Subsequent warm weather spoiled the fish and it was found necessary to permit them to fish for daily food in the close season.

Considerable work was done by *Gurdian Cromartie* in removing obstructions from the connecting creeks of the crooked lake chain, which with the high stage of water prevailing has placed the lakes in good shape.

The overseer attributes the falling off in the number of licenses and permits issued in the district to the general prosperity prevailing, which enabled all able-bodied men to find more lucrative employment.

64 VICTORIA, A. 1901

Five cents per pound was being paid for whitefish and trout in the local market, but very few were being brought in.

The steam tug and fishing plant formerly operated by the Killarney Fish Company has been removed from the district.

EDMONTON DISTRICT.

Overseer Young reports the whitefish lake fisheries in his district to be in capital condition. Lac la Biche is now again well stocked with fish, while the population steadily dependent on fish for food has decreased. Lac St. Anne has also picked up wonderfully from its former condition. In four nights 41 persons fishing with 67 nets, about 30 fathoms each, took 24,300 fish, the fish, too, being finer and larger than of late years. At Pigeon Lake not so much fishing as usual was done during the summer, the roads to it being in dreadful state. Owing to the bad weather, the Indians lost a great part of the hay they put up there, consequently fewer will winter at the lake and a smaller number of licenses be applied for.

The overseer reports that with the great influx of new settlers, a great deal more fish are being taken in the numerous creeks of his district. Fish traps and baskets are put in during the time of the spring run of the coarse fish, and large quantities are taken, from which, in many cases, a few of the best are taken for food and the rest left to rot or fed to pigs. The appointment of a special guardian or two to visit some of the worst points is recommended, in order that this evil may be checked.

LONG LAKE DISTRICT.

Overseer Foster reports a most satisfactory season at this lake. The water rose higher than it had been for seven years, there was an abundance of fish food and the fish taken were in prime condition. Spawning whitefish were observed in the shallows during the close season in much greater numbers than of late years and the spring run of coarse fish was also very good. With the close season as now enforced the stock of fish appears to be fully sustained. There were no infractions of the regulations. The bulk of the fish caught are taken in the winter but there was an increased amount of summer fishing in the past year. Most of the fish are marketed in the Regina and Moose-Jaw districts, but about 8,000 lbs. of whitefish were exported to British-Columbia.

QU'APPELLE LAKES.

Guardian Leader states that the heavy spring floods had a very beneficial effect on the waters of these lakes, the high water having afforded a long period of free passage from lake to lake and river. While there was a small increase in the catch of whitefish over last year, the quantity taken is still very small compared with that which these lakes once supplied, and it is noted that the fish are almost all of large size, reaching in some case to over ten pounds. It is evident that this valuable species is slow in recovering from the exhaustion it suffered in the very dry seasons of some years since and a supply of whitefish fry could be planted with much advantage. The catch of tullibee has been good: these weigh from $1\frac{1}{2}$ lbs. to 3 lbs. and sell very readily at 5 and 6 cents per lb. Pike, pickerel and suckers continue very plentiful, though vast numbers are destroyed every spring in the small creeks where they are left stranded. All fish taken are disposed of locally.

The dam at Katepewa successfully withstood the heavy strain of the long continued and exceptionnally high waters, and its fish way works very satisfactorily.

Fines were imposed in three cases for illegal fishing during close season, but no infraction of the regulations by licensed fishermen is reported.

SESSIONAL PAPER No. 22

BATTLEFORD DISTRICT.

Guardian Gagné reports having visited the various lakes in his charge, and that the close seasons were observed. A better catch of whitefish is reported at Jackfish Lake, it not having been fished during the past two years as much as formerly. At Turtle Lake, the catch was disappointing, and it is apparent that the lake will require some time to recover from the effects of former fishing in the spawning season. The whitefish of this lake have long been noted for their size and quality, the average weight being about 6 lbs.

There is still reason to complain of the destruction of fish in the Battle River by means of barriers and traps, but detection of the offender is difficult.

LOWER SASKATCHEWAN DISTRICT.

The fishery in this district was formerly confined to the food requirements of the resident Half-breeds and Indians, but in 1898 an export trade in sturgeon was started, the fish being caught in Cedar Lake and sent out in summer by way of Lake Winnipeg, and last winter by Winnepegosis. The high price prevailing for sturgeon and caviare led to an attempt to further develop this trade during the past summer, but it was not considered advisable to permit this in view of the dependence of the inhabitants of the district on the fish supply for their living during a great part of the year. The fishermen themselves petitioned for the closing of the fishery for the summer fearing the intrusion of outside men: this latter feeling leading to somewhat exaggerated statements being made as to the rapid depletion of the lake. Licenses were subsequently issued to permanent residents, only permitting them to take sturgeon during the winter season, when no fish are wasted and a far better price can be obtained by the fishermen. Overseer McKay of Grand Rapids has been placed in charge of the district and the present arrangement has given satisfaction. At Cumberland and Cheemawawin Guardians Jones and Hooker have been appointed: the gradual deterioration of the fisheries and the great dependence of the people upon them, making it necessary to prepare the way for the enforcement of a close season. The floods in the Saskatchewan River in the fall caused great hardship among the people, the fishing grounds were much disturbed, and the catch was much smaller than usual. Fish have become scarce in those lakes near the little centres of population, where the fishing has been very persistent both in and out of season. A close season will now be enforced at these points and its effects will doubtless be as beneficial as already proved elsewhere.

The extension of the Dauphin Railway will bring within reach of a winter market, the northern waters of Lake Winnepegosis, which are situated within the Territories. These are well stocked with whitefish and will no doubt receive the immediate attention of the commercial fishermen. It will therefore be necessary to at once arrange for the due regulation of this fishery.

I am, sir,

Your obedient servant,

E. W. MILLER,
Inspector of Fisheries N.W.T.

NORTH-WEST TERRITORIES.

Return of the Number of Fishermen, Boats, Nets, &c., and the Quantity and Value of Fish caught in the North-west Territories for the Year 1899.

Number.	DISTRICTS.	FISHING MATERIAL.				KINDS OF FISH.							TOTAL VALUE.	Number.			
		Boats.		Gill Nets.		Whitefish, lbs.	Trout, lbs.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee.			Mixed and coarse fish, lbs.		
		Number.	Value.	Men.	Number.											Fathoms.	Value.
1	Qu'Appelle.....	40	920	80	180	4370	1005	47000	78000	.....	500	26000	102000	7,135 00	1	
2	Macleod.....	10	200	15	15	500	125	5000	8000	.....	.....	.....	4000	2,250 00	2
3	Edmonton.....	108	1300	200	620	18800	2500	307000	9000	.....	1000	18000	25000	16,270 00	3	
4	Battleford.....	20	250	40	100	3500	500	50000	18000	1000	.....	3000	40000	3,670 00	4	
5	Prince Albert.....	109	1090	140	270	7500	1600	202000	27000	14000	.....	.....	50000	13,800 00	5
6	Northern districts.....	.....	.....	100	.....	.....	..	3500000	1500000	100000	.....	60000	1500000	257,450 00	6
Totals..		287	3760	575	1185	34670	5730	4111000	1640000	115000	1500	107000	1721000	.....	.....
Values .....		.....	..	.....	.....	.....	.....	205550	32800	5750	15	2140	17210	300,575 00	.....	

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Yield and Value of the Fisheries of Manitoba and the North-west Territories, for the Year 1899.

Kinds of Fish.		Rate.	Quantity.	Value.
		\$ cts.		\$
Whitefish, salted.....	Brls.	8 00	120	960
" fresh	Lbs.	0 05	7,610,520	380,526
Trout.....	"	0 05	85,000	4,250
Pickarel.	"	0 03	2,307,758	69,233
Pike.....	"	0 02	3,661,258	73,225
Sturgeon	"	0 06	559,787	32,437
" caviare	"	0 50	15,745	7,872
Perch	"		72,513	1,435
Tullibee.	"	0 02	346,948	6,939
Catfish.....	"	0 03	124,653	3,740
Coarse fish.....	"	0 01	3,630,981	36,569
Home consumption.	"	0 01	572,500	5,725
Total for 1899				622,911
" 1898.....				613,355
Increase.				9,556

RECAPITULATION

OF the Number of Tugs, Boats, Nets, &c., used in Manitoba and the North-west Territories, for the Year 1899.

Articles.	Value.
	\$
11 fishing tugs, 194 tons (72 men).....	29,000
533 fishing boats (967 men).....	13,202
188,470 fathoms gill-nets.....	23,726
159 fathoms seines.....	350
2 pound-nets.....	300
63 freezers and ice houses.....	57,225
27 piers and wharfs.....	6,450
Total.....	130,253

APPENDIX No. 8.

BRITISH COLUMBIA.

ANNUAL REPORT ON THE FISHERIES OF BRITISH COLUMBIA FOR
THE YEAR 1899, BY C. B. SWORD, INSPECTOR.

NEW WESTMINSTER, B.C., January 2, 1900.

HON. SIR LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to inclose statistical report of the fisheries of British Columbia for the year 1899, also returns of the pack of the various canneries and Collector Milne's report of the fur-sealing industry.

SALMON.

The pack of salmon was 765,519 cases, 36,744,912 lbs., showing a satisfactory increase over that of the previous year (23,642,452 lbs.) though fully twelve and a half million lbs. below the amount put up in 1897.

Of the total quantity of salmon packed, 664,332 cases were sockeye, 50,000 spring (mainly from the Skeena River) 43,337 cases cohoes, and the balance, 7,850 cases humpback and dog salmon. The humpback and dog salmon have only recently come into use as a commercial product, this being the first season in which they have been canned in the province, though both, but more especially the dog salmon have always been a favourite and important article of diet among the Indians.

The pack of these would have been very much larger this season had it not been for the intervention of the annual close time, from August 26 to September 25; the run of humpbacks being practically over before the fishing season reopened. This close time also interfered very much with the pack of cohoes, a considerable number of which had passed up the river before the opening of the season, and some of the canners who would otherwise have put up this variety did not think it would be profitable to them to start up their works again after a month of enforced idleness.

In the pack of the northern canneries no cohoes are included. The seasons of the runs of the different species there seem to be more sharply defined than in the Fraser River district, the sockeye run being over before the coho run begins and there being very few sockeyes seen except as part of the main run.

Guardians Roxburgh and Williams, the one on the Skeena River and the other at Rivers' Inlet, who have each had some years experience in their respective districts agree in their views on this point, and do not consider the regulations of the Fraser River suitable to these districts. They consider the close season between the sockeye and coho runs unnecessary and of very little use there, as there are so few straggling sockeyes; while from the fact that the coho run follows so directly on that of the sockeye, the enforcement of the present close season practically prohibits any pack of cohoes.

SESSIONAL PAPER No. 22

On Puget Sound the total pack this season was 871,500 cases, made up as follows :

Sockeyes	497,700
Spring-salmon. or Quinнат	20,200
Cohoēs	90,400
Humpbacks	245,400
Dog-salmon	17,800

The explanation given of the great preponderance of humpbacks over dog-salmon is, that these species run in alternate year, the present being the humpback year. These figures are approximate merely, the official returns being not yet available.

The total pack of the same district in 1898 is given by Mr. Little, State Fish Commissioner, as 400,200 cases made up as under :

Sockeye	252,000
Spring-salmon or Quinнат	11,200
Cohoēs	98,600
Dog-salmon	38,400

The pack of sockeyes being little more than one-half of the estimate for this year, and there having been no humpbacks put up.

In our own northern waters there were practically no cohoēs packed.

The amount of salmon used fresh is nearly 1,000,000 lbs. over that of 1898, this increase being roughly, the amount handled by the Columbia Packing Co., which has recently entered into the business of cold storage on a large scale. The amount of dry-salted salmon (mainly for export to Japan), is less by 1,000,000 lbs. this year than last, the export last year having been 2,000 tons (4,000,000 lbs.) as against 1,500 tons (3,000,000 lbs.) this year.

This is an industry which was first tried in 1897, in which year 300 tons (600,000 lbs.) were shipped as an experiment. The fish thus exported are mainly the dog-salmon which were formerly of no commercial value, and the industry is one susceptible of considerable development. The smaller export this year, as compared with 1898, is accounted for, partly by the run of dog-salmon being smaller this year, but mainly by the fact that the big run of humpbacks (which would otherwise have been substituted by the Japanese for the dog-salmon) took place during the close season.

Of barrelled salt salmon the amount is, this year, 3,450 brls., as against 2,600 brls. in 1898, the increase being mainly the product of a saltery established this year on the Skeena River.

This also is an industry which, especially in years of good runs, when the capacities of the canneries are overtaxed, should be susceptible of an enormous increase. It is the opinion of some of those engaged in the business that if means were provided by which their product could be shipped with an official guarantee of its grade and quality a better and surer market could be obtained and the business would very soon attain large proportions.

STURGEON.

The catch of sturgeon is falling off, the total for this year being only 278,650 lbs. as against 1,137,696 in 1897 and 770,000 in 1898. It is too early to say whether this falling off is occasioned by the depletion of the river or merely one of those fluctuations to which all fishing industries are liable.

In 1898 there were 164 licenses for nets issued as against 88 this year.

There is a good deal of illegal fishing with unbaited hooks still carried on notwithstanding the vigilance of the officers and the seizure of several lines.

HALIBUT

The company engaged in the halibut fishery in Hecate Strait are well satisfied with the results of their operations, but it is to be regretted that these as well as other sea fisheries are not being more generally prosecuted.

GUANO.

The return of the product of fish guano is 550 tons as against 200 tons in 1898.

A well equipped factory was established for treating the offal from the canneries on the Fraser River and operated satisfactorily. This unfortunately was burned just at the close of the fishing season. However, the proprietors, Messrs. Wymonde & Co., are now rebuilding and will have it in good condition for next season's work. As there is every reason to expect that the cannerymen will avail themselves next season more generally of this means of disposing of the offal, we may reasonably hope that this troublesome question has at last received a satisfactory solution so far as the Fraser River is concerned, and that if not wholly removed, the nuisance and unsanitary conditions engendered by the presence of the offal will be greatly mitigated.

On the Fraser River there are this year four canneries more than in 1898. There has been no increase in the number of these in other parts of the province, but several are likely to be built at different points on the northern coast for operation next season.

The fishing industry of British Columbia has already attained large proportions with every prospect of further development and some increase in the staff of guardians will be necessary to secure the observance of the regulations.

On the Fraser River it has been very difficult to enforce the strict observance of the weekly close time, the eagerness of the fishermen not to lose any of the run, making them throw out their nets before 6 p.m. on Sunday unless the guardian were actually present, and the beats of these guardians being far too extended for them to be able to watch more than a small portion of the river. Official flags to be hoisted at suitable points at 6 p.m. on Sunday would be of considerable effect in checking this practice as offenders could not then plead ignorance of the hour and the example of others.

Besides additional guardians, some provision for adequate steamer service is absolutely necessary for the proper supervision of the fisheries of the province.

I have the honour to be, sir,
Your obedient servant,

C. B. SWORD,
Inspector of Fisheries.

SESSIONAL PAPER No. 22

A.—SCHEDULE of Salmon Canneries operated in British Columbia, Season of 1899.

Owners or Agents.	Name of Cannery.	District.	Locality.	Packed in 48-lb. Cases.
Cleave Canning Co	Cleave	Fraser River..	New Westminster...	15,415
Burn & Walker.. . . .	Premier	"	"	5,750
F. Boutilier & Co.. . . .	Boutilier	"	"	11,000
Westminster Packing Co.. . . .	Westminster.. . . .	"	"	8,706
Peter Birrell.. . . .	B. C.	"	"	5,000
Fraser River Industrial Society.	Industrial	"	"	5,738
St. Mungo Packing Co.. . . .	St. Mungo.	"	"	12,970
A. Ewen & Co.	Ewen's.	"	Lion Island.... .	18,700
B. C. Canning Co.. . . .	Dear Island	"	Dear Island	9,200
Victoria Canning Co.. . . .	Delta	"	Ladner's..... .	17,750
"	Havlock	"	Port Guichon.....	13,275
"	Wellington	"	"	16,923
Turner, Beeton & Co.. . . .	Fisherman	"	"	7,253
A. B. C. Packing Co.. . . .	Wadham.	"	Ladner's..... .	10,132
"	Canoe Pass and B. A.. . . .	"	Canoe Pass.	13,000
"	Phenix	"	Lulu Island.	10,131
"	Brittania.	"	"	13,105
Macdonald Bros.	Westham Island	"	Canoe Pass.	8,014
Penzar & Crowder.	Anglo-American.. . . .	"	"	7,500
Butterman & Dawson	Brunswick No. 1	"	Steveston	8,938
"	" 2.	"	Canoe Pass.	8,709
Currie & McWilliams.. . . .	Currie's.	"	Westham Island	22,000
Albion Island Canning Co.. . . .	Albion.	"	Albion Island.... .	22,584
Canadian Pacific Canning Co.. . . .	Canadian Pacific.....	"	Lulu Island..... .	11,468
J. H. Hume & Co.	Hume's	"	"	7,700
J. H. Todd & Sons	Beaver.	"	"	11,409
B. C. Packing Co.. . . .	Colonial	"	"	15,400
Pacific Coast Packing Co	Bain's..... .	"	"	10,272
R. Ward & Co.. . . .	Imperial.	"	Steveston	8,260
Turner, Beeton & Co.. . . .	London,	"	"	8,156
Federation Canning Co	Lighthouse.	"	"	8,000
Canadian Canning Co.. . . .	Star.	"	"	12,100
United Canneries Co.. . . .	Gulf of Georgia.....	"	"	28,500
R. Huston	Atlas.	"	"	7,585
United Canneries Co.. . . .	Scottish Canadian.....	"	"	19,716
Canadian Canning Co	Fraser.	"	North Arm..... .	9,082
"	Vancouver.	"	"	17,890
Acme Canning Co.. . . .	Acme	"	"	7,650
Turner, Beeton & Co.. . . .	Terra Nova..... .	"	"	11,680
Alliance Packing Co.	Alliance	"	"	6,629
Dinsmore Island Canning Co.. . . .	Dinsmore Island.....	"	"	10,000
Provincial Canning Co.. . . .	Provincial.	"	"	8,000
Greenwood Canning Co.. . . .	Greenwood	"	"	3,950
J. H. Todd & Co.. . . .	Richmond.. . . .	"	"	10,320
Welch Bros.	Keltic.	"	"	5,536
United Canneries Co.. . . .	English Bay	"	English Bay.....	16,300
B. C. Canning Co.. . . .	Windsor.	Skeena River..	Skeena River.....	14,062
Carlisle Canning Co.. . . .	Carlisle	"	"	10,200
Globe Canning Co.. . . .	Globe	"	"	7,900
A. B. C. Packing Co.. . . .	North Pacific.....	"	"	18,200
"	British American	"	"	18,750
R. Cunningham.	Skeena..... .	"	"	14,750
Turner, Beeton & Co.. . . .	Inverness..... .	"	"	15,500
Victoria Canning Co.. . . .	Standard..... .	"	"	10,200
Anglo Alliance Canning Co	Anglo-Alliance.	"	"	3,000
Cunningham & Rhode.....	Lowe Inlet.	"	Lowe Inlet.....	10,341
Victoria Canning Co.. . . .	Wannock	Rivers Inlet..	Rivers Inlet	10,867
B. C. Canning Co.. . . .	Victoria	"	"	} 18,000
"	Rivers Inlet	"	"	
Wadham & Co.. . . .	Wadham.	"	"	19,610
A. B. C. Packing Co.. . . .	Good Hope.	"	"	7,500
Butterman & Dawson	Brunswick.	"	"	10,740
Vancouver Canning Co	Vancouver.	"	"	9,711
R. Draney	Namu.	"	Namu Harbour.....	7,200
A. S. Spencer.	Alert Bay	No. 7 District.	Alert Bay	6,950
T. Earle & Co.	Clayoquot.....	No. 10 "	Clayoquot Sound....	5,200
Federation Canning Co	Naas Harbour	Naas River...	Naas River..... .	11,630
"	Mill Bay.	"	"	7,812
				765,519

License No.	Vessels.	Masters.	Tons.	CREWS.		BOATS.	
				Whites.	Indians.	Boats.	Canoes.
5	Ainoko.....	G. Heater.....	75	6	24	2	12
8	Arietis.....	Wm. Heater.....	86	6	28	2	14
11	Beatrice.....	A. McDougall....	66	5	24	1	12
15	Borealis.....	T. Harold.....	47	6	19	2	9
19	City of San Diego.....	C. Campbell.....	46	6	20	2	10
14	Diana.....	A. Nelson.....	50	18	.....	6	.....
12	Dora Seward.....	H. F. Seward.....	94	7	34	2	17
22	Emma and Louisa.....	M. White.....	84	6	26	2	12
28	Entreprise.....	J. W. Anderson....	69	9	22	3	11
13	Favourite.....	L. McLean.....	80	6	36	2	15
20	Geneva.....	Wm. Byers.....	92	10	26	3	13
17	Hatzie.....	J. Daley.....	72	6	24	2	12
23	Ida Etta	C. Campbell.....	69	7	28	1	14
25	Libbie.....	C. Hackett.....	92	6	24	2	12
3	Mary Taylor.....	J. W. Todd.....	43	21	.....	6	.....
29	Mermaid.....	C. Le Blanc	73	23	.....	11	.....
16	Minnie	V. Jakobson.	46	6	20	2	10
4	Ocean Belle.....	R. O. Lavender....	87	9	19	2	9
9	Otto.....	J. W. Gosse.....	86	7	28	2	14
1	Penelope.....	D. G. Macaulay....	70	6	18	2	9
24	Teresa.....	G. Meyer.....	63	5	25	1	12
7	Umbrina.....	J. W. Peppitt	99	8	35	2	17
26	Victoria.....	T. Balcam.....	63	6	25	2	12
10	Viva.....	D. McPhee.....	92	6	31	2	15
27	Walter L. Rich	T. Cole.....	84	6	26	2	12
6	Zillah May.....	W. E. Baker.....	66	6	25	2	12
....	Indian catch.....	.....	.....	.....	.....	.....	.....
Totals			1,894	213	587	68	285

SESSIONAL PAPER No. 22

Sealing Report, 1899.

British Columbia Coast.		Vicinity Copper Island.		Behring Sea.		Totals.	Skins Branded.	Remarks.
Males.	Females.	Males.	Females.	Males.	Females.			
293	156	.....	.....	477	646	1,572	....
249	143	.....	.....	578	636	1,606	1	
163	147	.....	.....	387	381	1,078	1	
151	49	.....	.....	246	356	802	....
.....	.....	.....	.....	504	426	930	2	
480	296	.....	.....	.....	.....	776	....
124	195	.....	.....	495	738	1,552	1	
.....	2	.....	.....	113	798	913	....
147	454	.....	.....	362	842	1,805	1	
101	170	.....	.....	559	588	1,418	1	
719	863	.....	.....	396	475	2,453	....
355	38	.....	.....	394	533	1,320	1	
.....	.....	.....	.....	428	762	1,190	....
.....	.....	.....	.....	357	422	779	1	
65	97	.....	.....	20	34	216	....
507	811	210	489	37	81	2,135	...	
112	124	.....	.....	468	507	1,211	2	
468	235	.....	.....	129	627	1,459	....
398	327	.....	.....	536	444	1,705	....
420	193	.....	.....	189	420	1,222	...	
.....	.....	.....	.....	209	811	1,020	....
203	237	.....	.....	910	872	2,222	....
.....	.....	.....	.....	641	762	1,403	2	
159	283	.....	.....	425	842	1,709	....
.....	.....	.....	.....	119	390	509	....
270	267	.....	.....	590	322	1,449	3	
.....	892	.....	.....	.....	.....	892	....
5,384	5,979	210	489	9,569	13,715	35,346	16	

Return showing the Number, Tonnage and Value of Vessels and Boats and the quantity and value of Fishing Materials and the Kinds of Fish in the Province of British Columbia, for the year 1899.

Number.	DISTRICT.	VESSELS AND BOATS.				FISHING MATERIALS.				KINDS OF FISH.					Sturgeon, lbs.	Number.			
		Vessels.		Boats.		Gill Nets		Seines.		Salmon, in cans, lbs.	Salmon, salted, brls.	Salmon, dry salted, lbs.	Salmon, smoked, lbs.	Salmon, fresh, lbs.					
		Number.	Value.	Men.	Number.	Value.	Men.	Fathoms.	Value.								Fathoms.		
																		Value.	Fathoms.
1	Fraser River.....	55	220000	170	3405	170250	13400	408284	306213	1400	2100	3200	25014008	400	3000000	80000	1450590	255650	1
2	River's Inlet	12	44500	36	610	31500	2480	104000	78000	200	300	100	4014144	350	.....	2000	20000	.....	2
3	Skeena River.	10	31000	30	490	24500	1960	121000	90750	1000	1500	150	5899344	1000	.....	14500	70000	.....	3
4	Naas River.....	1	2500	3	100	5000	480	20000	15000	.....	.....	50	933216	200	.....	10000	10000	.....	4
5	East Coast, Queen Charlotte Island..	.....	.....	.....	25	3750	75	2500	1875	260	375	800	.....	150	.....	6000	2300	.....	5
6	West Coast, Queen Charlotte Island..	.....	.....	.....	28	3800	112	3000	2250	300	450	275	.....	.....	.....	.....	.....	.....	6
7	Cape Scott to Comox.....	.....	.....	.....	36	4000	90	2900	2175	500	750	275	333600	100	.....	5500	30500	.....	7
8	Comox to Victoria.....	65	13000	195	80	4800	160	5750	4300	4000	6000	2500	.....	250	.....	76000	260000	23000	8
9	Victoria to Cape Beale.....	7	1899	23	30	1500	120	3500	2625	1000	1500	2250	.....	250	.....	7500	25500	.....	9
10	Cape Beale to Cape Scott.....	3	750	12	25	1250	100	2750	2060	400	600	200	249600	750	.....	10000	4750	.....	10
Totals.....		153	313550	469	4829	250350	18977	673684	505248	9050	13575	9800	36443912	3450	3000000	211500	1873550	278650	
Values.....\$		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3644391	34500	120000	21150	187355	13933	

RETURN showing the Quantities and Value of Fish, &c., in British Columbia—*Concluded.*

[illegible]

D.—RECAPITULATION.

Of the Yield and Value of the Fisheries of British Columbia for the Year 1899.

Kinds of Fish.		Quantity.	Price.		Value.
			\$	cts.	\$ cts.
Salmon, canned	Lbs.	36,443,912	0	10	3,644,391 20
" salted	Brls.	3,450	10	00	34,500 00
" dry, salted	Lbs.	3,000,000	0	04	120,000 00
" smoked	"	211,500	0	10	21,150 00
" fresh	"	1,873,550	0	10	187,355 00
Sturgeon	"	278,650	0	05	13,932 50
Caviare	"	4,000	0	40	1,600 00
Herring, fresh and salted	"	625,000	0	03	18,750 00
" smoked	"	187,000	0	10	18,700 00
Halibut	"	2,075,000	0	05	103,750 00
Trout	"	328,800	0	10	32,880 00
Oulachons, fresh	"	610,000	0	05	30,500 00
" salted	Brls.	2,200	10	00	22,000 00
" smoked	Lbs.	27,000	0	10	2,700 00
Smelts	"	74,000	0	05	3,700 00
Codfish	"	537,500	0	05	26,875 00
Skill	Brls.	110	10	00	1,100 00
Shad	Lbs.	4,500	0	05	225 00
Oysters	"				12,000 00
Clams and mussels	"				9,080 00
Crabs and abelonies	"				22,500 00
Shrimps and prawns	"				5,000 00
Estimate of fish not included in above	"				350,000 00
Fish, mixed	"	476,000	0	05	23,800 00
Hair-seals	Skins.	7,600	0	75	5,700 00
Fur seals	"	35,346	12	50	441,825 00
Fish oil	Galls.	145,200	0	30	43,560 00
Fish guano	Tons.	550	30	00	16,500 00
Total					5,214,073 70

SESSIONAL PAPER No. 22

E.—CAPITAL in Fishing Plant and Material in British Columbia Fisheries, 1899

Vessels, Boats, Canneries, Nets, &c.	Number.	Value.	Total Values.
		\$ cts.	\$ cts
<i>Fisheries—</i>			
Vessels	153	313,550 00	
Boats	4829	250,350 00	
Scows, &c.		17,250 00	
Fathoms Gill-nets	673,684	505,248 00	
" Seines	9,050	13,575 00	
Lines, hooks, &c.		9,800 00	
Salmon canneries	69	1,380,000 00	
Cold storage-freezers	6	75,000 00	
Oil factories	2	35,000 00	
Salteries	2	5,000 00	2,604,773 00
<i>Fur Sealing—</i>			
Vessels (actually engaged)	26	84,500 00	
Boats "	68	6,800 00	
Canoes "	285	14,250 00	105,550 00
Total			2,710,323 00

Hands employed in fisheries, boats and canning	18,977
" vessels	4,829
Sailors and hunters in sealing (whites)	213
(Indians)	607
Total	24,626

APPENDIX No. 9

ONTARIO.

ANNUAL REPORTS OF INSPECTORS.

TORONTO, January 11, 1900.

HON. SIR L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—Respecting the fisheries in my division for the year 1899, I beg leave to report, as follows :—

The principal kinds of fish in my division are trout, whitefish, pickerel, herring, pike, sturgeon, eels, perch, catfish, bass, maskinonge and brook or speckled trout.

The herring and trout catch last year was exceedingly satisfactory, showing a very large increase over the previous year, owing largely to the open season which gave the fishermen from one to two months of extra fishing.

The whitefish catch in my division shows a small falling off, while in the catch of bass, maskinonge, perch and catfish the falling off is very marked, being about 50 per cent, (fifty) in each case.

Remunerative prices were received by the fishermen for their catch, which made last season a very profitable one.

The close season was not well observed, especially in the case of inland waters, where considerable netting was done. This accounts to a very great extent for the lessened amount of game fish, (bass and maskinonge) caught as compared with former years. I am giving special attention to this branch of the fisheries in my division, and hope to remedy the evil.

All of which is respectfully submitted,
Your obedient servant,

O. B. SHEPPERD,
Inspector of Fisheries.

MARKSVILLE, January 3, 1900.

HON. SIR LOUIS DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—In compliance with your instructions, I have the honour of making the following report of the fisheries for the north-western division of the province of Ontario for the year ended December 31, 1899.

The number of men employed as well as the number of gill-nets, pound-nets, tugs, sail-boats and other fixtures, such as piers, freezers, ice houses, &c., and their value is slightly in excess of last year.

SESSIONAL PAPER No. 22

As to the catch in Lake of the Woods, whitefish and pickerel aggregated same as last year, trout shows an increase. Fishermen claim the most noticeable difference is in sturgeon, which shows a decrease of one half the catch, which they claim was largely due to the long continued season of east winds, as the United States fisheries situated on the west side of the lake had a very heavy catch, and they attributed it largely to the same cause.

I would here recommend that your government ask the United States government to assist in the protection of our fishing interest in the Lake of the Woods district which are invaluable, for many American fishermen catch large quantities of sturgeon during spawning season, and thus threaten the total extermination of this species, one of the most valuable in all our northern lakes.

In Lake Superior the catch shows a slight increase over that of last year in whitefish and trout. In North channel of Lake Huron from St. Joseph Island to Little Current, whitefish and salmon trout almost depleted, and pickerel is the staple fish of this locality, Manitoulin Island, Duck, Squaw, Fitzwilliam and Bustard Islands gave an increased yield of whitefish and trout. I would here recommend that all pound-nets in my division should have one side of the pot 4 and one-half inches mesh so as to let the small fish escape. There was a good deal of illegal fishing this season as there were not sufficient officers of the Ontario government appointed to carry out the fishery regulations. If a fish hatching establishment were located at Sault St. Marie so as to serve both Lakes Superior and Huron, there is no doubt that it would give great satisfaction in these waters and would be of great benefit to them in every way.

I am sir, your obedient servant,

A. G. DUNCAN,
Inspector of Fisheries.

ONT

RETURN of the Number of Fishermen, Tonnage and Value of Tugs, Vessels and Boats, caught in the Province of

Number.	DISTRICTS.	FISHING MATERIALS.											
		Tugs or Vessels.				Boats.			Gill Nets.		Pound Nets.		
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.	Number.	Value.
	<i>Lake of the Woods and Rainy River District.</i>			\$			\$			\$		\$	
1	Lake of the Woods.....	3	38	4500	10	20	950	49	.....	10000	955	34	3500
2	Rainy Lake.....	1	15	1500	4	2	250	8	.....	1350	420	4	800
3	Butler Lake.....					1	50	3	.....	1000	102		
4	Eagle Lake.....					1	50	2	.....	1000	160		
5	Lake Wabigoon.....					1	50	2	.....	1000	100		
6	Lake Minnitakie.....					1	50	7	.....	2500	250		
	Totals.....	4	53	6000	14	26	1400	71	.....	16850	1927	38	4300
	Values.....\$												
	<i>Lake Superior.</i>												
1	Thunder Bay.....	9	168	9650	32	30	1870	46	.....	288900	8035	26	2290
2	Lower Portion Lake Superior...	6	70	15100	40	11	1850	24	.....	236600	11110	10	5000
3	Michipicoten Island.....	2		8000	20	1	150	2	.....	109000	4390		
4	Lizard Islands.....	1	36	3000	8	6	1200	12	.....	100000	4000		
5	Batchewana Bay.....	1	34	2000	5	2	300	4	.....			5	2500
6	Point Mamanse.....	1		2000	5				.....	27000	2020		
7	Goulais Bay and Parisian Island...					2	200	6	.....			5	2500
8	Sault Ste. Marie.....	1		100	2				.....	600	700		
	Totals.....	21	308	39850	112	52	5570	94	.....	762100	30255	46	12290
	Values.....\$												

NOTE—The Statisti Ontario are taken from the Provincial Reports.

SESSIONAL PAPER No. 22

ARIO.

the Quantity and Value of all Fishing Materials ; also the Kinds and Quantities of Fish
Ontario, during the Year 1899.

KINDS OF FISH.												TOTAL VALUE.	Number.
Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Pickrel or Doré, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.	Sturgeon bladders, lbs.		
												\$ cts.	
.....	253894	23469	132100	56200	....	135948	.....	14394	220	10674	380	44,042 54	1
.....	36978	.....	12962	.....	.....	11960	.....	.....	.....	600	68	4,558 34	2
.....	450	1900	.....	200	.....	.....	.....	.....	.....	.....	.....	234 00	3
.....	2500	2000	1900	.....	500	.....	.....	.....	.....	.....	.....	525 00	4
.....	13615	12990	83500	2500	.....	.....	100	4000	.....	.....	.....	6,906 20	5
.....	1601	592	300	1028	.....	.....	.....	.....	4000	.....	.....	323 40	6
.....	309038	40951	230762	59928	500	147908	100	18394	4220	11274	448		
.....	24723	4095	11538	2397	30	8874	3	1104	84	3382	358	56,489 48	
.....													
138226	243991	652504	33319	5333	....	6240	.....	.....	678	.....	.....	89,801 43	1
.....	189619	765047	1514	3119	.....	2772	100	.....	500	.....	.....	92,054 00	2
.....	13744	449790	.....	.....	.....	.....	.....	.....	.....	.....	.....	46,078 52	3
.....	57487	211839	.....	.....	.....	.....	.....	.....	.....	.....	.....	25,782 86	4
.....	58832	8904	914	175	....	1544	.....	.....	.....	.....	.....	5,742 30	5
.....	7456	64062	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,002 68	6
.....	44100	24152	600	2944	....	1228	.....	.....	.....	.....	.....	6,164 64	7
.....	8000	6300	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,270 00	8
138226	623229	2182598	36347	11571	.....	11784	100	.....	1178	...	.....
2764	49858	218260	1817	463	.....	707	3	.....	23	...	.....	273,896 43	

64 VICTORIA, A. 1901

RETURN of the Number, Tonnage and Value of Vessels and Boats, and the Quantity

[illegible]

SESSIONAL PAPER No. 22

and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.												TOTAL VALUE.	Number.
Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickrel or Dore, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
												\$ cts.	
.....	.....	45	30	.....	150	6800	.....	.....	100	.....	500	299 10	1
.....	.....	500	700	.....	.....	1500	.....	.....	.....	.....	.....	170 00	2
.....	.....	6000	22300	.....	12000	.....	.....	9000	.....	.....	.....	3,850 00	3
41	.....	6406	3448	.....	53590	4131	.....	7065	.....	500	.....	4,153 92	4
5	.....	24440	27679	.....	105366	3744	.....	11931	.....	1848	.....	10,913 98	5
.....	.....	58020	18620	.....	43970	325	.....	2650	.....	.....	.....	8,874 10	6
.....	.....	44300	1000	.....	2600	6000	.....	1000	.....	.....	.....	4,074 00	7
16	1013	6285	41247	.....	38183	3851	.....	13484	.....	3541	.....	7,654 81	8
.....	6000	8297	7396	.....	3114	.....	.....	.....	.....	.....	.....	1,679 06	9
.....	.....	55735	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,458 80	10
.....	.....	.....	23822	.....	.....	.....	.....	.....	.....	.....	.....	2,382 20	11
.....	.....	.....	.....	.....	116933	.....	.....	.....	.....	.....	.....	5,846 65	12
.....	.....	.....	.....	227	.....	15073	.....	415	.....	.....	.....	645 98	13
.....	.....	.....	.....	.....	.....	.....	654	.....	.....	188	2684	96 68	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14880	297 60	15
28½	7013	585638	700346	227	400406	247699	654	73921	993	12570	26277	152,367 55	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7200	144 00	17
.....	.....	16000	120000	.....	.....	.....	.....	.....	.....	.....	.....	13,280 00	18
.....	.....	21000	10000	.....	.....	.....	.....	.....	.....	.....	.....	2680 00	19
54	14026	832666	976588	454	776312	289123	1308	119466	1093	18647	51541		
216	2815	66613	97658	36	38816	11565	78	7168	32	373	1031	223,958 43	

SESSIONAL PAPER No. 22

Quantity and Value of Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.														TOTAL VALUE.	Number.
Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Whitefish, brls.	Trout, brls.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Caviare, lbs.		
														\$ cts.	
16		106169			129872		31636	8700				8000		23,570 52	1
		38000			38000		4000							7,104 00	2
		7800			2300		1850							946 50	3
		3000			4000		1000	2000			55			771 10	4
		29560			76500		42800	3000				2000		12,314 80	5
		43200			89900		68500	800	41100		500	63750		19,654 00	6
72	3000	4071	22	15			76925	10465	524		1406	13855		5,645 19	7
		2850	10	43	3000									1,058 00	8
		550	8	22	9000			1000						1,284 00	9
		107000			432000		41000	42000	11000		5000	18000		56,610 00	10
		17000			626000		10000							54,460 00	11
39	37100	95820			145538	410	29600	2400	25576	1700		5501		27,566 58	12
		5000			247000				300				3816	25,118 00	13
		24000			219000									23,820 00	14
		210000			266000		277200	23000	48000	2000	5000			61,220 00	15
14		50000		33	170000		90000	14000	1000	1000				26,536 00	16
14	154200	66200	1	126½	539484		20000	10000						65,059 40	17
155	194300	810220	41	239½	2897594	410	694511	117365	127500	4700	11961	111106	3816	.....
620	3886	64818	410	2395	289759	.....	34725	4695	7650	141	239	2222	1144	412,738 09	
241½	6750	2000	35	449½	745497	.....	.....	.....	900	.....	.....	.....	.....	80,709 70	1
61	2800	13600	.....	288	158325	.....	.....	.....	.....	.....	.....	.....	.....	20,100 50	2
...	18291	1083	.....	.....	216645	.....	28584	.....	5340	2058	11	11100	.....	24,150 52	3
29	197901	4391	.....	12	31760	.....	183070	.....	86413	.....	.....	36427	.....	22,788 12	4
331½	225742	21074	35	749½	1152227	.....	211654	.....	92653	2058	11	47527	.....	.....
1326	4515	1686	350	7495	115223	.....	10582	.....	5559	61	.....	950	.....	147,748 84	

SESSIONAL PAPER No. 22

Quantity and Value of Fish, &c., in the Province of Ontario—Continued.

		KINDS OF FISH.											TOTAL VALUE.	Number.
Number.	Pound Nets. Value.	Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Bass, lbs.	Pickarel or doré.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
													\$ cts.	
....	.....	50	400	.....	.....	108903	1000	.....	3996	.....	.....	28722	6,508 35	1
....	.....	.....	.....	.....	2000	58931	5780	.....	787	1215	3042	219968	7,881 62	2
9	2575	...	250	9126	1619	44028	20402	2598	74314	33145	9872	216177	14,012 13	3
9	2575	50	650	9126	3619	211862	27182	2598	79097	34360	12914	464917	.....
....	.....	200	13	730	289	10593	1087	156	4746	1031	258	9298	28,402 10	

RETURN showing the Kinds and Quantity and Value of all Fish, &c., in the Province of Ontario—Continued.

Number.	KINDS OF FISH.											TOTAL VALUE OF ALL FISH.	Number.
	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel or Dore, lbs.	Pike, lbs.	Sturgeon, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
DISTRICTS.													
Lake Erie.													
1	Pelée Island.	218746	13780	...	8975	49495	12794	5480	...	3155	1100	1700	9,433 01
2	County of Essex.	788616	58814	...	161262	292682	20873	78917	...	10528	90221	...	45,882 69
3	County of Kent.	366430	68030	...	159833	273238	22456	86460	...	735	192962	...	105,461 27
4	County of Elgin.	1145106	96911	...	582509	91811	16442	38256	...	2001	59696	...	66,930 23
5	Houghton and Long Point.	166025	66120	...	59981	89774	23931	9786	...	784	21424	4491	18,732 53
6	Port Rowan Bay.	2300	...	...	53207	41261	...	82433	7500	10990	138840	...	11,691 66
7	Normandale.	21373	...	...	7677	2652	...	19138	46	3571	4539	...	1,870 17
8	East of Port Dover.	185881	41773	240	141847	350	18210	28702	...	890	63549	133	18,205 59
9	Cayuga to Moulton's Bay, including Grand River, Low Banks.	74938	83733	25	77388	4640	530	34700	...	500	15600	...	*14,242 58
10	Port Colborne.	300	1690	...	525	...	300	3500	...	...	1380	...	318 05
11	Ridgeway	2150	171	...	8642	1950	1489	2335	...	...	7453	...	883 39
12	Fort Erie	...	...	...	8850	16350	25350	1400	...	...	2400	...	3,995 50
Totals.		6269565	431022	265	1270696	864203	142375	391107	7546	33154	599164	6324	...
Values		125391	34482	26	63535	34568	8542	11733	453	663	11983	1897	297,626 67

* In No. 9 include 9 barrels Herring and 600 pounds of Maskinongé.

RETURN of the Number and Value of Tugs and Boats, Nets, &c., in the Province of Ontario—*Con.*

FISHING MATERIAL.														
DISTRICTS.			Tugs and Vessels.			Boats.		Gill-nets.			Seines.		Dip-nets.	
Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.	Number.	Yards.	Value.	Number.	Value.
		§			§				§			§		
<i>Lake Ontario and Tributaries.</i>														
1 Queenston.....				2	10	7	*		60					
2 Niagara.....				10	540	22	276	27600	1614					
3 Port Dalhousie.....	1	2000	3	6	225	9	301	30100	945					
4 Louth.....				2	21	4		2100	70					
5 Clinton.....				3	100	6		4300	140					
6 Grimsby.....				3	300	6		13500	450					
7 Burlington Beach.....				19	1022	31	456	46600	2355					
8 Halton County.....				17	12600	46	750	78000	5300					
9 Peel County.....				3	275	9		6500	295				1	4
10 County of York.....				18	1500	24		33200	1985	3	275	105		
11 County of Ontario.....				7	250	16		5800	485					
12 County of Durham and Northumberland.....				18	525	30	26	34000	1155				27	300
13 Rice Lake and Trent River.....				26	304	50							85	1477
14 County of Prince Edward.....	2	16	6	57	1211	99	40	32130	1090				40	660
15 Bay of Quinte.....	1	300	4	35	900	75	10	9000	1000	5	250	750	64	1150
16 Lennox County and Napanee River.....				20	420	28		8100	186				36	520
17 Amherst Island and vicinity.....				18	394	31		560	9850				4	80
18 Wolfe Island and vicinity.....				18	400	24		4820	650				30	530
Totals.....	4	52	13	282	20997	517	1859	336310	27630	8	525	855	287	4721

*3 Machines.

Return showing the Kinds, Quantity and Value of all Fish, &c., in the Province of Ontario—Continued.

KINDS OF FISH.														
DISTRICTS.														
Lake Ontario and Tributaries.														
	Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel or dore, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	
1	Queenston	9000	300	.....	5000	5300	.....	.....	3070	1400	18000	.....	.....	1,677 20
2	Niagara	675	31105	.....	.....	108667	.....	.....	18339	.....	17357	.....	.....	9,556 30
3	Port Dalhousie	170094	12150	.....	.....	740	.....	.....	.....	100	6689	.....	13	4,617 81
4	Louth	25300	500	.....	.....	.....	.....	.....	.....	.....	12000	500	600	1,088 00
5	Clinton	51250	1000	.....	.....	.....	.....	.....	450	.....	5000	.....	.....	1,298 00
6	Grimsby	105000	3200	19000	.....	.....	.....	.....	.....	.....	5000	.....	.....	4,406 00
7	Burlington Beach	261331	51500	5230	100	1000	200	.....	2340	.....	6183	.....	200	10,265 51
8	Halton County	443000	600	3600	700	.....	1000	.....	.....	400	900	1000	12000	9,675 00
9	Peel County	500	.....	7040	2200	.....	150	.....	80	100	1000	100	4800	1,034 80
10	County of York	149800	22450	4810	.....	.....	1150	.....	77	.....	500	150	9000	5,521 62
11	County of Ontario	16000	3000	50	.....	.....	225	.....	.....	.....	50	.....	.....	575 50
12	County of Durham and Northumberland	15400	9130	4650	.....	.....	22900	.....	.....	.....	12000	7700	.....	2,943 40
13	Rice Lake and Trent River	.....	.....	.....	500	.....	7620	600	.....	556	2822	59065	56703	2,814 18
14	County of Prince Edward	20100	26350	500	.....	4600	115000	383	5100	3666	7130	10000	20000	16,890 46
15	Bay of Quinte	15570	1900	.....	.....	10250	114529	150	.....	25730	90667	64700	96500	15,090 47
16	Lennox County and Napanee River	6500	31010	4555	.....	2275	30120	.....	.....	.....	4994	31761	15350	2,893 99
17	Amherst Island and vicinity	300	2100	4600	.....	2200	9905	.....	2860	.....	30827	3900	3050	5,223 91
18	Wolfe Island and vicinity	.....	.....	.....	.....	.....	15503	1500	1000	3357	20058	19824	9175	2,787 26
Totals		1306211	259815	104177	17925	135232	318302	2633	33316	35309	241177	198700	221391	.....
Values		26124	20785	10418	1434	6761	12732	158	1999	2118	7235	3974	4428	98,359 41

RETURN of the Number and Value of Tugs and Boats and the Quantity and Value of Fish, &c., in the Province of Ontario—Con.

Number.	DISTRICTS.	FISHING MATERIAL.						KINDS OF FISH.												TOTAL VALUE OF ALL FISH.	Number.			
		Boats.		Gill-nets.		Hoop nets.		Bass, lbs.	Pickarel or dore, lbs.	Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.								
		Number.	Value. \$	Men.	Number.	Yards.	Value. \$										Number.	Value. \$						
1	Frontenac County.....	71	489	32	...	2300	205	57	1050	5190	100	900	5000	11500	81016	...	110	465	700	3275	69375	45995	6,865 09	1
2	Lac Seul County.....	24	245	30	34	1020	465	53	1060	1000	1700	8400	3779	...	79374	...	...	...	900	300	56740	21563	6,136 84	2
3	Prescott, Russell and Carlton Counties.....	10	59	9	7	250	26	3	60	...	...	...	240	1050	1300	...	...	830	2400	700	2610	4400	478 70	3
4	Renfrew County.....	1	10	1	...	...	...	5	100	...	...	...	...	...	250	...	...	538	150	75	7040	175	197 83	4
5	Hastings and Peterborough Counties including Otonabee river.....	...	...	...	...	...	...	...	...	1000	800	500	18900	...	...	24800	...	...	...	200	300	...	3,062 00	5
6	Lake Seaboard and Victoria County..	...	...	...	...	...	...	...	...	...	...	14320	196750	200	160	272 50	...	...	1286	1920	10510	22340	34,387 16	6
	Totals.....	106	803	72	41	3570	696	118	2270	7190	2660	24120	224669	12750	162100	296960	1833	5436	6470	146575	94493	...	...	...
	Values..... \$	...	...	...	...	...	...	...	...	144	208	2412	17973	638	6484	17817	110	326	194	2931	1889	51,127 62	...	

RECAPITULATION of the Number of Fishermen, Tonnage and Value of Tugs, Vessels and Boats, the Quantity and Value of all Fishing Materials, during the Year 1899, in the Province of Ontario.

Number.	DISTRICTS.	FISHING MATERIAL.												OTHER FIXTURES USED IN FISHING.									
		Tugs or Vessels.			Boats.		Gill-nets.			Seines.		Pound-nets.		Hoop-nets.		Night Lines.		Freezers and Ice Houses.		Piers and Wharfs.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Yards.	Value.	Number.	Yards.	Value.	Number.	Value.	No. books.	Value.	Number.	Value.	Number.	Value.	
1	Lake of the Woods and Rainy River.....	4	53	6000	14	26	1400	71	16850	1927				38	4300				17	9200			
2	Lake Superior.....	21	308	39850	112	52	5570	94	762100	30255				46	12290				12	80240			
3	Lake Huron North Channel...	23	260	29850	112	41	4685	69	137340	12400				108	20700				12	3450			
4	Georgian Bay	22	420	57700	133	128	10255	505	610731	77773				31	2000	4	40		8	1600	2		
5	Lake Huron.....	12	274	33200	70	82	5448	173	352905	32024				49	7990				19	2210			
6	River St. Clair					14	245	34	300	30	11	755	545							230	1	250	
7	Lake St. Clair and Detroit River.....	1	20	600	2	52	1676	97				25	3329	1815	9	2575	*28	*1545	4	375			
8	Thames River					26	354	95				25	615	805			*16	*24					
9	Lake Erie and Grand River...	23	499	68425	90	225	19172	364	155340	10268	20	5872	1781	216	75765	2	100		88	31560	1	600	
10	Lake Ontario.....	4	52	4300	13	282	20997	517	336310	27630	8	525	855			287	4721		49	8980		453	
11	Frontenac, Leeds, Carleton, Prescott, and Renfrew division.....					106	803	72	3570	696						118	2270	1450	3	56			
12	Peterborough, Victoria and other inland counties.....																						
	Totals.....	109	1886	238925	541	1033	70305	1889	3685	2373446	192803	89	11097	5801	497	125820	411	7137	22575	211	337901	4	1303

* Dip-nets.

RECAPITULATION of the Quantity and Value of all Fish

Number.	DISTRICTS.	KINDS						
		Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Whitefish, brls.	Trout, brls.	Trout, lbs.	Bass, lbs.
1	Lake of the Woods and Rainy River.....			309038			40951	230762
2	Lake Superior.....		138226	623229			2182598	36347
3	Lake Huron North Channel...	54	14026	832666		9	976588	454
4	Georgian Bay.....	155	194300	810220	41	2391	2897594	410
5	Lake Huron.....	331½	225742	21074	35	749½	1152227	
6	River St. Clair.....	50	400					
7	Lake St. Clair and Detroit River.....		250	9126				1619
8	Thames River.....							2000
9	Lake Erie and Grand River...	9	6269565	431022			265	53502
10	Lake Ontario.....	48	1306211	259815			104177	17925
11	Frontenac, Leeds, Carleton, Prescott, and Renfrew division.....		6190	1800			9300	9019
12	Peterborough, Victoria and other inland counties.....		1000	800			14820	215650
	Totals.....	647½	8155910	3298790	76	998	7378520	300579

Pickarel or doré, lbs.

Pickarel or doré, lbs.

SESSIONAL PAPER No. 22

caught during the Year 1899, in the Province of Ontario.

OF FISH.									TOTAL VALUE OF ALL FISH.	Number.
Pike, lbs.	Maskinonge, lbs.	Sturgeon, lbs.	Caviare, lbs.	Eels, lbs.	Perch, lbs.	Tullibee, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.		
									\$ cts.	
59928	590	147908	11274 ^{*448}	.....	100	18394	.....	4220	56,589 48	1
11571	.....	11784	.....	.....	100	.....	.....	1178	273,896 43	2
289123	1308	119466	.....	.....	1093	.....	18647	51541	223,958 43	3
117365	.....	127500	3816	.....	4700	.....	11961	111106	399,558 09	4
.....	.....	92653	.....	.....	2058	.....	11	47527	147,748 84	5
1000	.....	3996	.....	.....	.....	.....	.....	28772	6,508 35	6
20102	2598	74314	.....	.....	33145	.....	9872	216177	14,012 13	7
5780	.....	787	.....	.....	1215	.....	3042	219968	7,881 62	8
864203	600	142375	6324	.....	391107	7546	33154	599164	297,626 67	9
318302	2633	33316	.....	35309	241177	.....	198700	221391	98,359 41	10
161940	110	1833	.....	4150	4350	.....	135765	72133	13,678 46	11
160	296850	.....	.....	1286	2120	.....	10810	22340	37,449 16	12
1849774	304599	755932	21414	40745	681165	25940	421962	1595517	1,590,447 07	

* Sturgeon bladders.

RECAPITULATION

OF the Yield of the Fisheries of the Province of Ontario for the Year 1899.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Whitefish, salted.	Brls.	76	10 00	760 00
"	Lbs.	3,298,790	0 08	263,903 20
Herring salted.....	Brls.	647½	4 00	2,590 00
" fresh.....	Lbs.	8,155,910	0 02	163,118 20
Trout, salted.	Brls.	998	10 00	9,980 00
" fresh	Lbs.	7,378,520	0 10	737,852 00
Bass.....	"	300,579	0 08	24,046 32
Pickarel	"	3,580,126	0 05	179,006 30
Pike.....	"	1,849,774	0 04	73,990 96
Maskinonge.....	"	304,599	0 06	18,275 94
Sturgeon.	"	755,932	0 06	45,355 92
Caviare.....	"	21,414	0 30	6,424 20
Bladders.....	"	418	0 80	358 40
Eels.....	"	40,745	0 06	2,444 70
Perch.....	"	681,165	0 03	20,434 95
Catfish.....	"	421,962	0 02	8,439 24
Coarse fish.	"	1,595,517	0 02	31,910 34
Tullibee	"	25,940	0 06	1,556 40
Total 1899				1,590,447 07
" 1898				1,433,631 72
Increase.....				156,815 35

RECAPITULATION

OF all Fishing Tugs, Boats and Nets, &c., used in the Province of Ontario for Year 1899.

Articles.	Total Value.
	\$
109 tugs (1,886 tonnage, 541 men)	238,925
1,033 boats (1,889 men).	70,505
2,373,446 yards gill-nets.....	192,803
89 seines (11,097 yards).....	5,801
497 pound-nets	125,820
411 hoop-nets.....	7,137
44 dip-nets	1,569
22,575 night lines.	7 10
211 freezers and ice houses.....	137,901
4 piers and wharfs.....	1,303
Total.....	782,504

SESSIONAL PAPER No. 22

APPENDIX No. 10.

QUEBEC.

REPORT ON THE GULF OF ST. LAWRENCE FISHERIES FOR THE
SEASON OF 1899, BY FISHERY OFFICER WM. WAKEHAM, M.D.,
COMMANDER OF "LA CANADIENNE."

GASPÉ BASSIN, 2nd January 1900.

To the Hon. Sir LOUIS H. DAVIES, K.C.M.G.
Minister of Marine and Fisheries.

SIR,—I have the honour to submit herewith the annual report of the Gulf Division Fisheries, together with the usual statistics for the season of 1899. The recapitulation shows an increase in the value of the fisheries of \$142,352.85 over the returns for 1898. This is due to a better return from the cod, herring and salmon fisheries, the lobster and mackerel fisheries on the other hand having fallen off. On the lower north shore from Natashquan eastward to the Strait of Belle Isle the summer cod-fishing was a failure. For the third season in succession the capelin failed to strike inshore. The deep water fall fishing along the same coast was however fair. This enabled the fishermen who were already heavily indebted, owing to the two previous bad years, to obtain the necessary winter supplies, thus doing away with necessity for Government aid, a thing always to be avoided if possible. Otherwise the season was an uneventful one, the fall was open, and free from severe storms.

COD.

Cod struck in about the middle of May as usual, and continued fairly abundant on the south coast fishing grounds all season. The inshore cod fishery shows no diminuation, when bait is plenty the regular banks frequented by the boats show no decrease of their old time abundance; though the return to the gulf during the last two seasons of the dog-fish has caused considerable annoyance, and loss to fishermen. As stated in the opening paragraph, the summer cod-fishing on the Lower North Coast was for the third season in succession a failure. These failures seem to occur regularly, and generally for several years in succession. They are due to the movements of the capelin in June and July. The fishery is an inshore one, made almost entirely with trap-nets and seines, and when, from whatever cause, the capelin fail to strike into the bays, and among the islands, when the nets are fished there take no cod; when the capelin do strike in, the cod follow, and the fishery is always good, it never lasts more than about three weeks, but during even this short run the fishery is often enormous, the catches being only limited by the ability of the fishermen to handle them.

Foreign markets, especially in South America, show an improvement. The prices paid to fishermen by the large exporting firms were consequently advanced.

SALMON.

The yield of the salmon fishery shows a slight increase, this was confined entirely to the north shore, as along the coasts of Bonaventure and Gaspé the net fishing was

again below an average, while the fly fishing, for sport, was also in many rivers poor. This was due entirely to natural causes, the salmon struck the coast late, the winds during the netting season were not favourable, in most cases for good net fishing we require off shore winds, while for good sport fishing we need moderately high water, and showery weather. Neither of these prevailed, and consequently all salmon fishing, whether for market or sport, was slack. Breeding fish were very abundant in the river in the fall, the future of the fishery must therefore benefit materially by the shortened catch. On the north coast all the conditions were more favourable, and the catch, both by netters and anglers, was fully up to the average.

HERRING.

The herring fishery both in Bonaventure and Gaspé was good, the catch showing an increase of about 10,000 bbls. As herring were scarce in Newfoundland, and on the Newfoundland Labrador, prices were firm and our fishermen reaped the advantage. For several years back increased attention has been paid to this fishery by the fishermen living on that part of the coast of Gaspé extending along the south shore of the Gulf from Gaspé Bay to Cape Chatte. The fish however are not put up as carefully as they might be, while the barrels used are poorly made and too slight to stand handling. The resulting product of the fishery therefore does not command the price it certainly would were more skill and care shown in the method of its preparation, both in curing and packing. At present our pickled herring are only marketed in our own Province. The output could be greatly increased,—the fat herring taken along our shores in the summer and fall are quite equal to those caught on the other side of the Atlantic, yet we find the United States, and even our own western markets, supplied with herring cured in Scotland and Holland. This is simply because our own herring are roughly and carelessly cured, and are put up in badly made barrels.

MACKEREL.

This fishing is now confined entirely to the Magdalen Islands, when the catch for this season was slightly below that of last year. In the Baie Chaleur a few mackerel were taken along the north shore of New Brunswick, but none whatever on the Quebec side. A few small schools were seen by passing vessels in the upper part of the Gulf between Manicouagan and Cape Chatte, but none were caught. It would seem that the schools which formerly spawned in our large bays, such as Gaspé and Seven Islands, where at one time considerable catches were made, have been entirely exterminated, or have altogether abandoned the grounds.

LOBSTERS.

The lobster pack continues to fall off, the total yield being about 10,000 pound tins below that of 1898, though in Gaspé and Bonaventure a slight increase in the pack is shown, this is due entirely to favorable weather conditions, and the increased number of canneries in operation, and traps fished. I very much fear that under the new regulations, which considerably lengthen the fishing at the Magdalen Islands, where the bulk of the packing is done, and where the lengthened season will be taken advantage of by the small packers, this diminution will go on with yearly increasing rapidity. The larger and more careful packers will everywhere close down long in advance of the close season, as they have always done.

Owing to the taking over of the licensing of the salmon and smelt fisheries by the Provincial Government of Quebec, the services of the fishery officers in Gaspé and Bonaventure were dispensed with. On the north shore, below Point des Monts, in Saguenay County, where we still continue to issue the net licenses, the officers were retained. The fishery statistics, however, are still being taken on the south shore by the officers detailed to collect the bounty claims.

SESSIONAL PAPER No. 22

At Anticosti the extensive works projected by Mr. Menier are being vigorously pushed, large tracts of low and swampy land are being cleared, drained and brought under cultivation. The breakwater at Ellis Bay, now over half a mile long, is being rapidly extended to deep water, while the entrance to the bay is shown by a system of range beacons and buoys. The prosecution of all this work has entailed the employment of a couple of hundred hands, in addition to the local labour. These men are all Canadians and the supplies they require, when not furnished on the island, have been imported from Quebec. It is expected that a decision will be reached during the coming winter in the matter of the rights of the settlers at Fox Bay. Should this decision be favourable to Mr. Menier, as it can hardly fail to be, he proposes to put up extensive buildings on the shores of Fox Bay, for the purpose of carrying on there a general fishing business, when a large number of fishermen from Gaspé and the Maritime Provinces will find employment there.

I beg to append synopsis of the reports of those of the local officers who have furnished any.

SYNOPSIS OF THE REPORTS OF THE LOCAL FISHERY OVERSEERS.

Bonaventure Sub-division, extending from Maguasha to Paspébiac Point. *Mr. George Forrest* reports that the salmon fishing failed almost completely. Herring were abundant throughout the whole season. Cod were scarce in the early part of the season, but later they struck into the upper part of the Baie des Chaleurs in great abundance. The lobster fishery continues to fail. The yield is about the same, but this is only made by the greatly increased number of traps used. The prices of fish ruled high, and many more people than usual engaged in the fishery. The regulations were strictly observed.

Port Daniel Sub-division, extending from Paspébiac Point to Point Macquereau. *Mr. F. X. Chappardos* reports the salmon fishing a failure. Herring were plentiful. The codfishing was most abundant especially in the fall. The lobster pack shows about the same return as usual.

Gaspé Sub-division, extending from Point St. Peter to Fame Point. *Mr. Walter Langlois* reports a decrease in the salmon fishery of 28,583 lbs., as compared with 1898. Herring fishing was about as usual. Herring were taken at Point St. Peter and Chien Blanc as late as the 7th December. The codfishing was good, a total of 25,390 cwt. being taken in this subdivision. The price was good, being from \$1.25 to \$1.50 per cwt. better than last year. The lobster fishery continues to fail. The smelt fishing was good, the total catch for 18 seines being 84,000 lbs.; an increase of 38,000 as compared with last season. No mackerel were taken.

MAGDALEN ISLANDS.

Mr. J. A. Chevrier reports for the southern division of the islands that the spring seal hunt was a failure, only about 200 seals having been captured off Deadman Island. Herring were abundant, many vessels from the Maritime Provinces and the United States having loaded with herring in Pleasant Bay. The spring mackerel fishery was not as good as usual. This was due to unfavorable weather and other causes. The fall or fat mackerel fishery was also below the average. Mr. Chevrier attributes this to the setting of nets by foreign fishermen in vessels. He thinks there should be no nets set in Pleasant Bay or around Entry Island after the 1st August. He would also insist that all schooners be compelled to remain in harbour, and send out their boats to fish just as the shore boats go out, &c. He thinks that one of the cutters should be detailed to see that this is done, at least during the time of the mackerel and herring fishery.

The lobsters are diminishing yearly. He thinks the fishing should close on the 1st July and open again on the August 15th. No illegal lobster fishing was detected in his subdivision.

64 VICTORIA, A. 1901

Mr. Procul Chevrier reports for the northern half of the islands, that the spring herring fishery began on the 28th April, and ended about the May 30th ; during this time herring were very abundant. Lobster packing began on the 10th May, the fishing was good up to about the May 30th ; but after that date it fell off rapidly. The increase shown in the pack is due entirely to the greater number of traps fished. A certain amount of illegal lobster fishing was done in the Lagoon between House Harbour and Grand Entry in spite of the fact that extra guardians were put on. Wherever traps were found in the Lagoons they were destroyed. The mackerel catch shows a decreased yield, the local fishermen attribute this very largely to the ravages of the Dog fish. No seals were killed on the shore ice in the spring, innumerable seals were seen on the ice, but owing to contrary winds they never came on shore so as to permit the hunters to reach them. Cod were abundant especially in the fall, but very few people belonging to the northern islands now engage in this fishery.

Godbout sub-division, extending from Manicouagan to Jambons. *Mr. N. A. Comeau* reports only a moderate catch of salmon. This is in part due to the fact that the usual number of nets were not fished. The netting began on the May 24th and continued to the first week of July. Both cod and herring show a decrease, this was largely due to bad weather, bait was also scarce at times. Halibut are increasing in abundance. Lobster are decreasing in quantity, though the pack is kept up by the increased number of traps used, a decrease in the size of the lobster is also apparent. The winter seal hunt was a good one.

Moisie sub-division, Jambons to Pigou. *Mr. T. Migneault* reports that salmon net fishing began on the May 17th and closed on the July 10th. The fishing was good, better than that of 1898, though the nets were taken up in the River Moisie on the June 24th, fish ran in for some time later. Sport fishing was good, some 200 fish having been taken by the anglers. The cod-fishing was poor, but the price ran high, \$4.25 per cwt. being paid to fishermen on the spot. Herring which seem to have avoided Seven Islands Bay for several years back returned again this season, and fair catches were made.

Mingan sub-division, Pigou to La Corneille. *Mr. George DuBerger* reports the salmon net fishing as being a little less than last year, though, it may be considered a fair average fishing. The cod-fishing shows a decrease, especially at Esquimaux Point, when the boats which early in the season go down to Natashquan did nothing. The price of cod was however high, \$4.25 per cwt., this more than made up to the fishermen for the reduced catch.

Natashquan sub-division, La Corneille to English Point. *Mr. John W. Scott* reports the spring seal hunt a failure, only half the usual number of seals having been killed. The salmon fishing was good, it having yielded a return of 38,000 pounds, which was 15,000 pounds in excess of the catch in 1898. The cod-fishing was poor though the returns show an increase of 1300 cwt. over those of last season. The lobster pack shows a small increase, this was due to the fact that the usual packing season was extended by two weeks.

The above is humbly submitted.

WM. WAKEHAM,
Officer in charge of the Gulf Division Fisheries.

SESSIONAL PAPER No. 22

REPORT ON THE FISHERIES ON THE SOUTH SHORE FROM LEVIS TO
BAIE DES CHALEURS, BY INSPECTOR N. LAVOIE.

L'ISLET, Que., January 18, 1900.

The Honourable Sir L. H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—In transmitting herewith the fishery statistics for the year 1899, of that part of my division extending from Levis to the division line between the counties of Rimouski and Gaspé, I deem it necessary to offer a few remarks.

Taken as a whole the yield of these fisheries shows an increase over that of 1898, as well as over that previous years. This may be ascribed to several causes, amongst which are the improved modes of fishing pursued in several localities especially between Montmagny and Levis, and in other parts of the division, between Capucins and Matane. Prices are also exceptionally good for some kinds of fish, such as cod, herring, salmon, &c., which, of course, goes towards swelling the totals. In other places, where the antiquated modes of fishing are the same as those pursued one hundred years ago, the results are not so flattering. I even noticed signs of decrease, which induces me to believe that a good many farmers who pursue fishing as a desultory practice, will give it up in the course of time.

Speaking generally, I may say that cod-fishing was about equal to that of 1898, but prices were more remunerative. Spring and fall fishing for herring was most abundant. Very few of the former are salted, being lean and poor at this time of the year. They are then sold fresh or used for manuring purposes. But the fall herring, which are caught from Sandy Bay going down, are mostly all salted. People use gill-nets for this fishery, while the spring herring are mostly caught in brush weirs. Salmon and shad fishing seem to have been somewhat better this year than last between St. Michael and Levis, but proved almost a complete failure between St. Michael and Matane. Eel-fishing was good at Levis and Beaumont, and very inferior from Beaumont downwards, with the exception of River Ouelle. The fishing gear used between St. Valier and Ste. Anne is antiquated, while it is of an improved kind between Berthier and Levis. Fishing for the so-called sardines was good from St. Denis to Rimouski and Sandy Bay. There seems to be a scarcity of small fish. Various causes are ascribed for this. Some people say it is due to sawdust, others put the blame on brush fisheries. I am inclined to think that contrary winds and natural changes of temperature, added to the above causes, may have had some influence on the disappearance of these fish.

I have no remarks to make on the local fishery overseers except that they do not appear to have anything particular to do.

I think it would be an improvement if I am charged with the collection of these statistics another year, to do this work during the month of October, from Levis to Claude River, at the same time as I am engaged on fishery bounty business. It would be a great saving of time and money, and would insure greater accuracy.

I have the honour to be, sir,
Your obedient servant,

N. LAVOIE,
Fishery Inspector.

REPORT ON THE FISHERIES OF THE WESTERN DIVISION OF QUEBEC
BY INSPECTOR A. H. BELLIVEAU, FOR 1899.

Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—The so-called western district under my charge comprises all that part of the Province of Quebec lying south-west of the Saguenay River and Bellechasse County.

For the convenience of computing comparative statements, the fishery subdivisions of former years have been adhered to as much as possible. Without assistance, it would be almost impossible for one person to secure reliable statistics in so extensive an inland district as mine. The former reluctance of the fishermen to give an accurate estimate of their fish catch, fearing an increased license fee, should not now exist, as the statistics are required by the federal, while the fees are regulated and collected by the provincial Government. The great difficulty in most of these inland divisions is the excessive number of amateurs or residents fishing the neighbouring streams or lakes for amusement or for home consumption. I find that most of this catch was never before taken into consideration; most of the officers being under the impression that only the capture by licensed fishermen was required. I always endeavour to impress upon the suspicious fishermen that our only object in collecting and publishing annual statements is to show our fellow-citizens as well as foreigners the natural productiveness of our waters. We should be as proud of our piscine wealth as we are of our agricultural and mineral products. I have met foreigners who were astounded to learn that our lobster industry yielded over three and a half million dollars, that our salmon has reached five millions, while other branches as cod and herring are yielding annually four and two million dollars respectively. Many Canadians have still to learn that our waters yield over twenty million dollars annually. The two principal fresh water species, trout and whitefish are therein included with a value of over \$600,000 each.

Should the collection of fishery statistics continue to devolve on me, I will attempt to devise some means of enabling at least the most important fishermen of each locality to keep a better record of their catch than heretofore.

Island of Orleans.—Its Pêches Anglaises.

In that part of my district on the north side of the St. Lawrence, below Quebec, there was little difference in the yield of fisheries as compared with previous seasons. At the Island of Orleans, the hundred weirs encircling that island were less remunerative than usual. Salmon and shad have declined to such an extent, that the fishermen are now losing hopes of ever seeing them return to their former haunts. The principal fishes now captured in these weirs are eels and sardine-herring.

These *pêches anglaises*, as they are usually designated there, consist of a galvanized wire-netting, of about $1\frac{1}{4}$ inch square mesh, set on poles, (the holes of which are often drilled in the rock), from the height of tide to its lowest fall. The pound at the end of the leader, which in my opinion becomes a real trap-net, is divided into three compartments, the entrances of which are gradually getting smaller and narrower. The end or nose is planked at the bottom and covered on top with the same wire net as the remainder of the trap. This part of the trap has no regular fish escape, but it has a door, which I think, serves more to admit the owner inside at low tide than to give the fish an exit on Sunday. At the end of the fishing season this part of the *pêche* is floated ashore simply by removing the large stones used upon it as sinkers. There, it is kept altogether until the next season, when it is again floated with the tide to the end of the leader. This fishing apparatus costs from \$100 to \$600 according to size and height of tide, and it lasts from three to five years.

SESSIONAL PAPER No. 22

These *pêches anglaises* are often set too close to one another. Every riparian owner thinks that he has the same right as his neighbour, and sets such a fishery on his fore-shore whether it will be profitable or not.

Murray Bay division. Speckled trout.

In the Charlevoix and Saguenay districts, excepting a shortage in salmon, the other species yielded an average catch. The quantity of speckled trout caught in the lakes of this district is enormous. Unfortunately the regulation prohibiting trout netting is often violated in these beautiful waters, and many tons of this game little fish are illegally shipped to the market by the settlers of the vicinity. On my first visit, I found these speckled beauties openly peddled to the numerous boarding houses of the locality. Subsequently, steps were taken to a more efficient protection. Upon my recommendation, an officer was appointed to specially supervise the shipping of illegal fish from the Murray Bay district. It seems shortsightedness on the part of the settlers to indiscriminately net these beautiful lakes, so accessible to the seekers of rest and sport in the numerous summer resorts of the famous Malbaie. No thorough sportsman will attempt angling in reputed netted waters. More revenue would be derived from attendance and supplies to the tourists than the paltry individual gain of a few boxes of netted trout. It is however wonderful to notice how long these waters have stood these illegalities and still be fairly productive of this game fish.

Lake St. John division.—Ouananiche.

In the Lake St. John districts a limited number of netting privileges is permitted by the local government, and no doubt the catch of fish is as large as ever, owing to the renewed exertions for its capture. Lake St. John, the home of the famous sporting Ouananiche, is seventy miles in circumference, being nearly as wide as long, that is, of a circular shape. It is fed by several important streams, with beautiful Indian names, such as the Ashuapmouchouan, &c. Here the wealthy tourists, attracted by the celebrated Saguenay trip, will not only find sport in whipping the ouananiche pools of the Décharges, but excitement as well in shooting the chain of swift and surging rapids, extending over sixty miles to Chicoutimi, constituting the head of the Saguenay River. A steamer crosses the lake from Roberval to the Décharge every day. To show the protective inclination of the lessee of these waters, it is sufficient to state that he is operating a private fish hatchery, situated about four miles above Roberval, from which millions of fry are annually liberated to restock neighbouring waters. Besides the Ouananiche, which is called the loveliest and most gamesome of the salmon kind, pike, doré and whitefish are also abundant in these waters.

INLAND DIVISIONS.

In the inland district proper, from Quebec to the Upper Ottawa, the fishery returns show a surplus value of \$37,000 over that of the preceding year. The mighty St. Lawrence with its numerous tributaries, from the boundary line to the old capital of the province, constitute the main portion of this vast district, especially if we include lakes St. François, St. Louis, and St. Pierre, which are merely enlargements of the said river. The principal kinds of fish in these waters are sturgeon, trout, pike, pickerel, catfish, eels and perch. The first five species yielded over 300,000 lbs. each, and all exceeded the previous catch, but shad and whitefish have considerably declined. The capture of trout in the inland waters of Portneuf, St. Maurice and Maskinongé counties, as well as the million little tom-cods caught through the ice fronting these counties, greatly help to make up the aggregate value of this division.

Lake St. Louis.

In Lake St. Louis, where netting and seining has been somewhat curtailed, the nightline fishing shows good results, over 200,000 lbs. of sturgeon being reported from this large expanse of water. The yield of eels, perch, catfish and other coarse fish is also considerable. Nearly the whole catch of this division, from Chateauguay, Beauharnois, &c., is shipped to the Montreal market. The fish are kept alive in reservoirs for that purpose until Wednesday of each week, when they are sub-divided in packages, ready to retail.

Lake St. Pierre—Its Verveux Fishing.

This Lake St. Pierre division shows a large increased value in its general fisheries, it is easily noted that Catfish and other coarse fish or *poisson-mou*, now constitute the staple part of the catch. In the county of Yamaska nearly 300,000 lbs. of such coarse fish is returned; in Richelieu over 150,000 lbs. and in Maskinongé and Berthier about 125,000 lbs. In the first and last of the above mentioned counties, eels and pickerel or doré form an important factor in the total aggregate.

In this sub-division, the largest and most important of my district, fishing is mostly carried on with hoop-nets or *verveux*. It is estimated that between three and four thousand of these fishing engines are to be found around Lake St. Pierre, whose numerous shallow bays and inlets are so suitably adapted to this mode of fishing.

These *verveux* may vary in size according to the depth of water they are to be set in, but they are all of a uniform shape and construction. Six strong hoops or ribs form the skeleton of the *verveux*, the central one being larger than the others, all about 18 inches apart, the whole being covered by a strong cotton net, divided in three compartments, from the last of which there is hardly an escape for the captives. A leader and two short wings of net complete this fishing apparatus. With a few poles it is easily set where the bottom is soft. Hence the bays of Richelieu and Yamaska districts, with their numerous islands bordered with rushes and water weeds, especially that of St. François and La Vallière, are so well adapted to this mode of fishing.

It is doubtful if one-tenth of the *verveux* in use in Lake St. Pierre are licensed. A fisherman paying fees for two or three will perhaps own ten, twelve, fifteen or even more. I know one family, father and sons, who own fully one hundred and fifty of these hoop-nets. Of course they claim that they never use them all at one time, but under favourable conditions there are but few on the dry land. Should every licensed fishing gear bear the number of its license, or some other distinct mark of recognition, it would greatly facilitate the duties of the officers in charge. The pole of indication in these illegal ones is cut short under the surface of the water, and thus nothing appears to the unobservant.

If properly regulated, there would not be much to say against *verveux* fishing. Their principal advantages are their limited cost, (about \$10) their durability and their facility to be handled by one person. Besides the fish caught therein are alive and uninjured, thus giving the conscientious fisherman the opportunity of liberating any protected or game fish thus found during its close season. The objection to the *verveux* comes not from its use, but its abuse. It is high time that stringent measures be adopted and enforced to regulate and perhaps yet save and popularize this mode of fishing wherever practicable. The chief objection to this gear is the diminished size of mesh now used in its construction. While our licenses allow a $2\frac{1}{2}$ inch mesh extension measure, a two inch one has been tolerated and now we often find a $\frac{3}{4}$ inch square mesh, especially in the end compartment of the *verveux*. With such a mesh is it to be wondered that complaints are repeatedly heard against the small fish caught and shipped to market from this district?

The tarring of these nets has also become a source of complaint from many quarters. Amongst others, Officer Riendeau of Montreal, strongly urges the total prohibition of its use, claiming that it is injurious to fish life. From my own observations so far, I am not thoroughly convinced that the effects of tarred nets when properly done, is so injurious as represented to be. It is claimed that while the tarred engine will last four

SESSIONAL PAPER No. 22

or five years, the other will not last one season of constant use in the water. With such a difference it would be injudicious to condemn too hastily a process of such economic value. No doubt some are badly prepared remaining always sticky and almost polluting their immediate vicinity, while others are perfectly waterproof and dry to the touch. This goes to show that there is either a proper way to dye them or the right kind of tar to do it with. After this application of tar is partly dried, they should be immersed in water, then dried again in the hot sun for a long time until thoroughly hardened, before they should be allowed to be set. In fact the proper way would be not to use them at all the first year, or at least, not until the fall fishing. In the case of old nets re-tarred, one should note that every coat of tar applied means a reduction of the size of the mesh, hence the measurements should be made after the tarring process.

The way these hoop-nets are sometimes set at the mouths of small streams or creeks with wings extending almost across their channels, is also a cause of complaint and should not be tolerated, as the object is to capture all the parent fish returning to deep water after having spawned in the upper streams.

Therefore, having the above remarks in view and in order to prevent or at least to curtail and check the further destruction of immature fish, I have recommended that the following points be enacted by O. C in regulations to be vigorously enforced after one season's notice.

Length of wings not to exceed ten feet ; the mesh of wings and leader to be $1\frac{1}{2}$ inch square, and in the *verveux* proper $1\frac{1}{4}$ inch square when in the water. No *verveux* to be set during the months of July and August. None to be set at any time as to bar any channel or in any way prevent the passage of fish in such outlets. Hoop nets improperly tarred to be liable to seizure. Length of leaders and distances between each net as well as other disputes between fishermen to be settled on the spot by the fishery officers.

All such *verveux* found set in the water, without the license's number or other mark agreed upon, engraved on a float or metallic tag attached to the pole used to raise the net, would be liable to seizure and confiscation besides the usual fine

Tom-Cod.

Though apparently insignificant, the catch of tom-cod in the vicinity of Three Rivers deserves mention. Notwithstanding the excessive fishing of two centuries, these little fish seem as plentiful as ever. Their capture last year is estimated at 39,000 bushels, which at 60 cents each, brings a rather handsome remuneration, at a time when it is certainly most needed, by the indigent individuals then without other employment. It really becomes a genuine Christmas call and New Year's gift, as they invariably make their appearance in this locality about the New Year's festival time. Once a year, the tom-cod comes from the depths of the Atlantic towards our coasts for the purpose of depositing its eggs on the sandy bottom of some distant tributaries of Canada's greatest river, their own birth place. Late in the fall, they are noticed here and there in small groups as they ascend the St. Lawrence reaching Quebec in the beginning of December, but the main school of them proceed on their journey to the terminus which seems to be St. Maurice River, where they regularly appear about the 20th December, remaining less than a month. This little fish is then about ready to spawn, its eggs being nearly ripe; however, now begins their slaughter.

The fisherman first builds a shanty on the ice where he eats, sleeps and lives almost constantly while this manna lasts. An oblong opening of about ten feet is then cut in the ice, through which the deadly engine is set facing the current. This fishing gear consists of a sort of bag-net projecting from a rather slim wooden frame, forming the opening through which these *petits poissons* are caught and held captive as others follow and press in. When the operator thinks his bag-net is full enough, he raises it and empties its live contents on the ice. Thus each haul brings out from one to two bushels of these dainty little fish, which lay wriggling and frisking about until the crisp winter air stiffens them in all the various distortant positions imaginable. Those who escape, spawn a short distance up the St. Maurice river, and then again take the direction of

64 VICTORIA, A. 1901

the sea their natural haunts and home. Though they seem to have hugged the northern shore of the St. Lawrence in their ascent, they now prefer the southern coast in their seaward trip. The immense quantity thus captured from Deschambault to Three Rivers for generations past, during the most important period of their reproduction, does not seem to have had visible effect on the supply. Like the real cod, they are so prolific that the few spawning ones can keep up the stock.

The tom-cod or *petit poisson*, as called in Three Rivers, and known in the United States as frost fish, belong to the cod family. Although it neither exceeds a foot in length nor a pound in weight, its resemblance to the true cod is so striking, that it is difficult to distinguish it from its young cousins. The shape of the head and body is the same, their colour, their three dorsal and anal fins are also identical.

Ottawa River Division.

The Ottawa River is no doubt the most important tributary of the St. Lawrence. Owing to increased fees, the number of licensed fishermen has perhaps diminished, but the quantities of fish especially the coarser grades, are still yielding large catches. Of late years more netting has been allowed in Lake Deschenes, and this also helps to swell the total aggregate of this division. No seines are allowed in this district, only gill nets and night lines.

The numerous inland lakes and streams of the Gatineau and Pontiac districts also contribute large quantities of trout, bass and pickerel. Many of these waters are now leased to private clubs for the purpose of recreation and sport. Were all the catches of the individual members of these different clubs added to that of the dispersed settlers for home consumption, the result would be surprising.

The Eastern Townships.

The eastern townships are also bespangled with magnificent lakes of all kinds and sizes, connected by beautiful streams, all so well adapted to the benefit and delight of the seekers of rest and sport. I will not attempt, in this report, the description of such waters as Lakes Memphremagog, Magog, Brome, Massawippi, St. Francis, Aylmer and Megantic, all within a comparatively short radius of Sherbrooke and other towns of easy railway access. Their proximity to such towns as well as to the United-States border renders them almost a sportsman's paradise, and thousands of our neighbouring tourists annually spend their summer vacation at these popular resorts.

Unfortunately these beautiful and once well stocked inland waters do not receive the efficient protection that their importance seems to warrant.

Respectfully submitted,

A. H. BELLIVEAU,
Inspector.

PROVINCE OF QUEBEC—Gulf of St Lawrence District.

RETURN showing the Number, Tonnage and Value of Vessels, Boats, Nets, &c., and the Quantity and Value of Fish caught in the Province of Quebec, for the Year 1899.

RESTIGOUCHE SUBDIVISION (From Head of Tide to Magnasha Point.)

[illegible]

BONAVENTURE SUBDIVISION (Muguasha Point to Paspébiac Point).

1	Maguasha and Nouvelle	1125	75	125	220	5600	2800	4	120	80	....	....	100	50	7200	200	3000
2	Carleton	1700	120	200	350	8000	4000	5	160	125	....	....	140	70	13300	400	4000
3	Maria	2250	160	275	500	12000	6000	3	90	75	....	....	200	100	21400	650	8000
4	New Richmond	180	16	30	50	750	350	....	....	....	....	....	30	15	20000	40	4000
5	Black Cape	450	35	70	80	2000	1000	....	....	....	....	....	20	10	3000	40	400
6	Capelin	2200	165	300	625	10625	5300	9	300	225	....	6	600	300	520	800	14000
7	Bonaventure	3750	275	500	900	15000	7500	30	1000	750	....	35	1100	550	6000	1500	25000
8	New Carlisle	500	40	65	80	1500	750	12	420	315	....	5	160	80	530	150	5000
9	Paspebiac	3500	4	400	400	7000	3500	40	1400	1000	....	125	900	450	....	600	10000
	Total	15655	4	1965	3205	62475	31200	103	3490	2570	171	1570	3250	1625	71950	4380	73400

PORT DANIEL SUBDIVISION (Paspebiac to Point Macquereau).

	1	2	3	4	5											
1 Hopetown	40	1560	65	70	1040	900	8	195	165	30	600	250	190	2775	220	.....
2 Nouvelle	65	1700	140	75	1200	1020	10	245	230	25	325	180	150	2775	600	.....
3 Shigawake	55	1300	70	80	1560	1326	6	180	200	10	180	200	180	16588	650	.....
4 Port Daniel	170	5100	265	250	3250	2475	20	600	650	60	500	500	460	16588	1250	.....
5 Gascons	165	6600	250	400	8000	5600	18	540	540	120	1000	500	460	5050	1100	..
Totals	495	16260	790	875	15050	11321	62	1760	1785	245	2605	1630	1440	27188	3820	...

RETURN showing the Kinds and Quantities of
RESTIGOUCHE SUBDIVISION (From

Number.	DISTRICTS.	KINDS					
		Herring, smoked, lbs.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, fresh, lbs.
	<i>Bonaventure County.</i>						
1	Restigouche .....	.....	.....	75	.....	.....	.....

BONAVENTURE SUBDIVISION

1	Maguasha and Nouvelle	10000	.....	.....	95	.....	9000
2	Carleton	15000	5520	12	60	.....	6000
3	Maria	18000	.....	.....	300	.....	8000
4	New Richmond .....	.....	.....	.....	60	.....	1000
5	Black Cape	5000	.....	3	20	.....	500
6	Capelin	18000	3600	10	2000	2	7000
7	Bonaventure	30000	9600	15	4000	5	10000
8	New Carlisle	5000	.....	10	500	.....	1000
9	Paspebiac .....	.....	.....	.....	6000	12	10000
	Totals	101000	18720	50	13035	19	52500

PORT DANIEL SUBDIVISION

1	Hopetown .....	.....	24500	.....	1500	10	.....
2	Nouvelle .....	.....	.....	.....	900	6	.....
3	Shigawake .....	.....	9450	.....	650	.....	.....
4	Port Daniel	5500	35808	.....	3800	10	.....
5	Gascons .....	.....	4150	.....	5500	25	.....
	Totals	5500	73908	.....	12350	51	.....

SESSIONAL PAPER No. 22

Fish, &c.—County of Restigouche—Continued.

Head of Tide to Maguasha Point).

OF FISH.											TOTAL VALUE OF ALL FISH.	Number.
Haddock, dried, cwt.	Hake, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
.....	7000	273000	25	45000	.....	.....	.....	250	\$ cts. 24,745 00	1

(Maguasha Head to Paspebiac Point).

.....	.....	.....	10000	.....	12	400	...	32	24	2000	5,305 60	1
.....	.....	.....	1000	.....	9	200	.....	20	75	5000	9,002 50	2
.....	.....	.....	.....	.....	40	700	.....	100	75	6000	12,337 50	3
.....	.....	.....	8000	.....	5	200	.....	20	15	400	5,558 50	4
.....	.....	.....	500	.....	5	.....	.....	7	5	500	1,333 60	5
10	25	75	200	.....	2	.....	3	670	540	5500	16,710 75	5
25	40	4200	600	.....	10	.....	8	1340	1075	15000	36,686 50	7
5	15	200	500	.....	.....	.....	.....	170	125	1000	3,793 25	8
100	100	1500	800	.....	10	200	.....	2000	1500	3000	32,135 00	9
140	180	5975	21600	.....	93	1700	11	4359	3434	38400	122,863 20	

(Paspebiac to Point Macquereau).

30	.....	.....	.....	.....	.....	.....	50	1000	500	1500	14,525 00	1
15	.....	.....	.....	.....	.....	.....	45	600	300	1000	7,970 00	2
20	.....	.....	.....	.....	.....	.....	20	355	250	1200	8,310 00	3
300	.....	.....	3000	15500	.....	.....	200	2200	800	1800	36,424 20	4
400	.....	.....	.....	.....	.....	.....	600	3150	1100	600	34,985 00	5
765	.....	.....	3000	15500	.....	.....	915	7300	2950	6100	102,214 20	

SESSIONAL PAPER No. 22

Fishing Materials, &c.—Province of Quebec—Continued.

of Gaspé.

(Point Macquereau to Point St. Peter's).

KINDS OF FISH.														TOTAL VALUE OF ALL FISH.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Herring, smoked, lbs.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Haddock, dried, cwt.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.		
														\$ cts.	
5375	550	.....	28460	7000	8	140	. . .	.....	13000	250	5300	1000	500	42,457 00	1
13300	188	.....	9840	2770	4	60	.....	.....	4500	183	2685	300	165	18,975 00	2
4500	2534	2000	28230	15882	20	180	.....	.....	8000	720	11732	2150	750	91,389 60	3
.....	366	.....	27024	8510	12	...	.....	.....	...	300	8000	750	50	45,778 80	4
600	282	.....	17840	8910	....	30	. . .	.....	.....	410	7900	560	150	45,471 00	5
11150	100	.....	19200	1787	.....	.....	.....	.....	...	75	1200	200	50	14,603 00	6
11200	710	.....	18000	8700	.....	35	.....	..	5000	250	8000	1000	300	48,885 00	7
.....	130	.....	...	5700	.....	10	.....	.....	.....	240	5000	530	300	26,755 00	8
46125	4860	2000	148594	59259	44	455	.....	. . .	30500	2428	49817	6490	2265	334,314 40	

(Point St. Peter to Fame Point).

28500	480	.....	15300	2300	...	.....	...	500	.....	100	1500	750	.....	21,905 00	1
25000	10	.....	..	..	.....	.....	.....	1000	84000	.....	.....	..	.....	9,340 00	2
17700	133	.....	4000	620	.....	.....	.....	500	.....	.....	400	150	.....	7,747 00	3
4500	225	.....	8500	1600	.....	.....	.....	.....	.....	75	1200	500	.....	11,310 00	4
.....	880	.....	11000	5850	3	..	2700	.....	.....	250	4000	1000	.....	33,120 00	5
.....	340	.....	.....	4200	4	.....	2200	.....	...	175	3000	800	.....	21,220 00	6
.....	550	.....	960	6400	7	.....	6700	.....	.....	300	5000	1200	.....	33,232 00	7
.....	243	.....	...	1950	.....	.....	750	..	...	70	1300	500	.....	10,267 00	8
...	240	.....	.....	1200	2	.....	800	...	.....	50	800	450	.....	6,975 00	9
75700	3101	.....	39760	24120	16	....	13150	2000	84000	1020	17200	5350	....	155,116 00	

Return showing the Number and Value of Vessels, Boats and Fishing Materials, &c.—Province of Quebec—Continued.

County of Gaspé—Continued.

MONT LOUIS SUBDIVISION (Fame Point to Rivière à Pierre).

DISTRICTS.	BOATS.			FISHING GEAR OR MATERIALS.						KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.				
	Number.	Value.	Men.	Gill Nets.			Seines.			Salmon, fresh, lbs.	Herring, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Halibut, lbs.	Trout, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.			Fish as manure, brls.			
				Number.	Fathoms.	Value.	Number.	Fathoms.	Value.																
<i>Gaspé County—Con.</i>																									
1	Grand Etang to Chlorydorne.....	97	2100	111	196	6000	2900	2	80	50	770	350	1440	5025	10	13200	400	250	4600	820	120	27,072	00	1	
2	Petite Anse to Frégate Point.....	38	650	57	65	1625	825	..	..	..	..	90	..	1710	4	2000	..	100	1600	300	20	8,780	00	2
3	Great and Little Vallée.....	47	1300	79	80	2000	1200	1	30	40	800	205	1060	2350	5	9000	..	120	2200	430	30	13,342	00	3	
4	Magdalen.....	19	370	28	31	670	460	..	..	..	1700	100	..	370	..	..	..	..	320	105	...	2,473	50	4
5	Manche D'Epée and Gros Mâle. . .	37	420	53	35	825	350	..	..	..	800	180	..	845	..	..	..	..	800	165	...	4,747	50	5
6	Anse Pleureuse to Rivière à Pierre	63	1080	88	105	2925	1550	2	60	60	3850	1040	..	1150	..	2000	..	..	1000	230	...	10,375	00	6
Totals.....		301	5920	416	512	14045	7285	5	170	150	7920	1965	2500	11450	19	26200	400	470	10520	2050	170	66,790	00		

STE. ANNE DE MONTS SUBDIVISION (Rivière à Pierre to Cape Chatte).

1	Claude River	24	480	38	24	600	360	..	..	..	1600	296	..	458	..	3015	..	..	500	60	..	3,877	50	1
2	Marsou.....	4	80	8	3	77	45	..	..	..	600	37	..	60	..	1350	..	..	50	10	..	673	00	2
3	Martin River.....	3	60	4	3	75	45	..	..	..	..	30	..	46	..	500	..	..	60	80	..	492	00	3
4	Cape au Renard and Anse à Jean.	6	120	7	6	150	90	..	..	..	..	113	..	24	..	550	..	..	140	18	..	672	00	4
5	Ste. Anne des Monts.....	121	2420	177	175	4725	2625	..	..	..	16160	2600	..	1970	..	9135	5000	..	2025	100	200	23,783	00	5
6	Cape Chatte.....	56	1120	70	70	1150	1050	..	..	..	2960	450	..	560	..	6030	5000	..	700	55	300	6,177	50	6
Totals.....		214	4280	304	281	6777	4215	..	..	..	21320	3526	..	3118	..	20580	10000	..	3475	323	500	35,675	00	

County of Gaspé—Continued.

MAGDALEN ISLANDS SUBDIVISION—SOUTH.

Number.	FISHING VESSELS AND BOATS.				FISHING GEAR OR MATERIALS.						KINDS OF FISH.										TOTAL VALUE OF ALL FISH.	Number.							
	Vessels.		Boats.		Gill Nets.			Seines.			Trap Nets.,		Herring, salted, brls.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Haddock, fresh, lbs.	Smelts, lbs.	Eels, brls.	Fish oil, galls.			Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.				
	Tonnage.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.																		
<i>Gaspé County—Con.</i>																													
1	Entry Island	25	500	8	5	200	10	70	1750	420	10080	20	15	40	3,600	50	1
2	Amherst Island	18	800	5	215	10750	615	190	4750	1040	5	575	1800	97724	4057	750	110	3000	450	500	200	...	72,320	30	2
3	Grindstone Island.	43	1300	13	381	18350	990	19	49200	11708	12	1555	3800	1	400	172944	2654	260	...	50	1950	1600	600	91,242	60	3	
Totals.		66	2600	26	776	37100	1605	359	103450	23168	29	3685	5900	2	1400	280748	6731	1010	...	160	4965	2090	1100	200	...	167,163	40		

MAGDALEN ISLANDS SUBDIVISION—NORTH.

1	House Harbour	115	2875	302	460	11500	2300	....	....	....	1	200	1537	1780	93120	798	....	500	6	250	1187	250	....	56,729	50	1
2	Grand Entry	23	575	51	27	675	150	....	....	....	5	1200	535	134	167568	300	....	....	8	150	145	150	....	39,281	10	2
3	Grosse Isle	22	550	41	4	100	25	....	....	....	....	....	162	193	29760	156	....	....	....	78	162	....	....	10,385	40	3
4	Bryon Island	3	75	8	2	50	12	....	....	....	....	....	....	30	68304	75	....	....	....	30	30	....	....	14,464	80	4
Totals		163	4075	402	493	12325	2487	....	....	....	6	1400	2234	2137	358752	1329	....	500	14	508	1524	400	....	120,860	80	

RETURN showing the Number, Tonnage and Value of Vessels, Boats, etc.

County of
GODBOUT SUBDIVISION

Number.	DISTRICTS.	FISHING VESSELS AND BOATS.							FISHING GEAR OR MATERIALS.							
		Vessels.				Boats.			Gill Nets.			Seines.			Trap Nets.	
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
	<i>County Saguenay.</i>			\$			\$			\$						\$
1	Manicouagan, Godbout, Pt. des Monts and Trinity Bay Caribou to Jambons	5	90	2600	10	135	2700	141	230	6900	6900	2	160	160	1	300

MOISIE SUBDIVISION

1	Ste. Marguerite.....					6	350	12	9	1275	1050	2	250	352	...	....
2	Seven Islands.....	2	67	1300	10	23	2050	46	22	1498	1350	3	145	258	....	....
3	Moisie.....	1	40	850	5	23	1500	51	35	4300	4100	2	50	125	....	....
4	Pigou.					1	25	2	1	25	15	....	....	....	....	....
	Totals..	3	107	2150	15	53	3925	111	67	7098	6515	7	445	735	....	....

MINGAN SUBDIVISION

1	River aux Graines and Chaloupe.....					18	900	45	...	...	...	5	150	170	....	....
2	Sheldrake and Thunder River					73	3640	173	6	600	500	15	600	1200	4	2000
3	Dock Ridge Point and Jupitagan.....					15	734	37	3	300	250	5	125	210	...	....
4	Magpie					67	1665	146	8	1000	750	9	270	225	...	....
5	St. John River.....	2	41	500	5	85	2875	180	20	2500	2000	5	300	350	....	....
6	Longue Pointe and Mingan.					23	970	66	15	1700	1500	4	176	250	....	....
7	Romaine and Esquimaux Point	5	246	3000	37	120	6000	250	20	2000	1000	15	600	1300	3	600
8	La Corneille					3	200	4	3	250	150	1	50	50	....	...
	Totals.....	7	287	3500	42	404	16984	901	75	8350	6150	59	2271	3755	7	2600

SESSIONAL PAPER No. 22

and Kinds of Fish, &c.—Province of Quebec—Continued.

Saguenay.

Manicouagan to Jambons.

KINDS OF FISH.															TOTAL VALUE OF ALL FISH.	Number.
Salmon, fresh, lbs.	Herring, salted, brls.	Mackerel, salted, brls.	Lobsters, preserved in cans, lbs.	Cod, dried, cwt.	Cod tongues and sounds, brls.	Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Squid, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skin, No.		
45984	542	1	2016	932	7	8660	900	100	2000	10	2180	81	26	410	18,978 00	1

(Jambons to Pigou).

3380	5	...	...	165	1	1500	424	...	...	...	200	75	...	23	1,759 65	1
40000	67	...	...	487	2	2728	...	...	...	...	500	150	...	48	10,943 80	2
256087	...	...	...	425	15	2000	2100	...	...	...	475	150	...	50	53,907 40	3
...	...	...	...	5	...	...	...	...	...	...	15	10	...	4	44 50	4
299467	72	...	...	1082	18	6228	2524	...	...	...	1190	385	..	125	66,655 35	

(Pigon to Watsheeshoo).

...	...	...	...	1100	3	3500	...	...	...	24	750	325	...	6	5,596 00	1
3800	...	...	...	3700	11	13000	...	...	...	40	2600	1500	500	14	20,427 50	2
3335	...	...	...	880	...	5500	...	...	...	14	650	350	100	7	5,571 75	3
12400	600	...	...	3000	10	5000	...	...	...	25	2300	2000	300	12	21,435 00	4
33800	...	...	...	5500	12	10000	...	...	...	30	4300	3000	400	15	36,008 75	5
6510	...	...	...	1850	4	5000	...	...	...	15	2000	750	100	200	11,327 00	6
2800	43	...	...	2500	16	12500	...	...	...	30	4600	750	100	655	15,635 75	7
6110	...	...	8820	363	...	...	...	...	...	...	340	50	...	35	4,658 75	8
68755	643	...	8820	18893	56	54500	...	...	...	178	17540	8725	1500	944	120,660 50	

RETURN showing the Number, Tonnage and Value of Vessels, Boats

County of
NATASHQUAN SUBDIVISION

Number.	DISTRICT.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.								
		Vessels.				Boats.		Gill-Nets.			Seines.		Trap-Nets.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
			\$			\$				\$			\$		\$	
	<i>Saguenay County.</i>															
1	Watsheeshoo to Agwanus ..	.....	.....	.....	.....	38	3750	64	36	1240	1110	5	400	350	.....	.....
2	Isle à Michon & Natashquan	.....	.....	.....	.....	4	250	8	.....	.....	.....	.....	.....	.....	.....	.....
3	Natashquan Village.....	4	88	200	33	37	4000	75	95	3100	2500	7	525	450	.....	.....
4	Natashquan River.....															
	Totals	4	88	200	33	79	8000	147	131	4340	3610	12	925	800	.....	.....

ROMAINE SUBDIVISION

1	Kegashka & Musquarro ..					9	500	15	10	300	100	2	100	100		
2	Washeecootai & Romaine ..	1	25	500	4	8	320	12	15	800	350	2	100	75		
2	Coacoachoo					2	20	4	2	150	50					
	Totals	1	25	500	4	19	840	31	27	1250	500	4	200	175		

ST. AUGUSTIN SUBDIVISION

1	Wolf Bay & Etamamu					20	500	56	10	500	400	1	200	100	1	400
2	Point à Maurice & St. Mary ..					3	100	6	5	250	200					
3	Harrington					44	1320	90	30	1200	750	10	1500	1000	8	3000
4	Little Meccatina and Whale Head					36	820	38	25	1250	800	5	500	350	9	3600
5	Mutton Bay and Meccatina ..					50	1250	75	35	1400	850	10	1200	750	10	4000
6	Old Post and Big Meccatina ..					25	750	30	25	1050	750	3	600	500	5	2000
7	Kikapoe to St. Augustin...					15	300	20	12	600	400	3	400	250	1	250
8	St. Augustin to Chicatica ..					18	540	23	10	750	500	3	400	250	2	500
	Totals					211	5580	338	152	7000	4650	35	4800	3200	36	13750

BONNE ESPERANCE SUBDIVISION

1	Nabitippi to Day Islands...					13	650	23	8	1150	400	2	60	60	3	800
2	Old Fort—Burnt Island ...	1	20	400	3	35	1000	58	10	980	600	4	160	350	8	1600
3	Bonne Esperance.....	2	200	3000	12	50	1500	100	15	1200	900	6	300	1000	10	3000
4	Pidgeon Island to Salmon Bay	1	53	1000	8	56	1680	112	10	1000	750	9	740	1200	11	2750
5	Little Fishery to Belles Amours					25	1250	60	8	700	500	5	300	500	8	2400
6	Bradore Bay-Loney Point Greenly Island.....					80	3200	160	15	300	1800	10	1000	2000	16	4000
	Totals	4	273	4400	23	259	9280	513	66	8030	4950	36	2560	5110	56	14550

ANTICOSTI

1	Fox Bay and Salmon River					10	250	20	12	240	100	2	100	100		
2	English Bay					12	600	22	24	480	175	2	100	75		
3	Strawberry Cove					15	600	28	30	500	250	4	200	150		
4	Shallop Creek					2	60	2	3	170	100					
	Totals					39	1510	72	69	1490	625	8	400	325		

SESSIONAL PAPER No. 22

and Fishing Materials, &c.—Province of Quebec—Continued.

Saguenay.

(Watsheeshoo to English Point).

KINDS OF FISH.															TOTAL VALUE OF ALL FISH.
Salmon, fresh, lbs.	Salmon, salted, brls.	Herring, salted, lbs.	Lobster, preserved in cans, lbs.	Cod, dried, cwt.	Cod, tongues and sounds, brls.	Halibut, lbs.	Trout, lbs.	Smelts, lbs.	Eels, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.	Seal skins, No.	
															\$ cts.
1600	23280	.....	.....	1600	500	.....	5	60	200	200	.....	50	5,778 50
4400	2400	1000	.....	1000	300	.....	.....	30	890	400	.....	35	6,450 75
39488	60	720	2000	.....	4400	900	1200	4	70	3100	600	.....	400	19,381 60
45488	60	26400	3000	.....	7000	1600	1200	9	160	4190	1200	.....	485	31,610 85

English Point to Coacoachoo).

3000	.....	20	2400	400	.....	2000	1000	.....	.....	300	100	.....	25	3,331 25
4500	.....	15	.....	250	.....	1500	1200	.....	.....	200	50	.....	15	2,383 75
400	.....	.....	.....	.....	.....	.....	500	.....	.....	90	.....	.....	30	194 50
7900	.....	35	2400	650	.....	35000	2700	.....	.....	590	150	.....	70	5,909 50

(Cocoachoo to Chicatica).

2500	.....	...	24000	500	.....	.....	1000	.....	.....	390	100	...	30	7,704 50
200	.....	.....	2880	100	.....	.....	500	.....	.....	600	50	.....	173	1,537 25
200	.....	100	.....	3000	.....	.....	.....	.....	.....	2165	500	.....	55	13,908 25
600	.....	15	26400	1800	.....	.....	250	.....	.....	1700	300	.....	69	13,731 25
900	.....	109	1540	4000	.....	.....	1500	.....	.....	4000	750	.....	310	19,786 50
1500	.....	75	.....	1500	.....	.....	1500	.....	.....	2960	300	.....	580	8,813 00
5900	.....	.....	.....	350	.....	.....	6000	.....	.....	1000	70	.....	230	3,872 50
800	.....	.....	1680	400	.....	.....	4000	.....	.....	627	75	.....	109	2,932 85
12600	.....	299	56500	11650	.....	.....	14750	.....	.....	13442	2145	.....	1556	72,286 10

(Chicatica to Blancs Sablons).

.....	25	65	960	1423	.....	.....	.....	.....	.....	716	400	.....	.....	7,333 80
.....	15	15	3440	1000	.....	.....	2000	.....	.....	725	100	.....	45	5,596 75
.....	60	315	.....	3232	.....	300	1000	.....	.....	1616	350	.....	.....	16,227 80
.....	40	40	240	2003	.....	.....	2800	.....	.....	1000	250	.....	.....	9,763 00
.....	10	370	.....	1045	.....	.....	.....	.....	.....	123	120	.....	.....	6,146 90
.....	10	445	.....	3525	.....	1600	800	.....	.....	3161	300	.....	280	18,018 90
.....	160	1250	4640	12225	.....	1900	6600	.....	.....	7743	1520	.....	325	63,087 15

ISLAND.

.....	8	20	35900	30	.....	500	.....	.....	.....	140	400	...	30	8,229 50
.....	.....	25	.....	250	.....	750	.....	.....	.....	125	75	100	.....	1,375 00
.....	.....	60	.....	1000	8	2000	.....	.....	.....	500	150	60	.....	4,925 00
.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	120 00
.....	16	105	35900	1280	8	325	.....	.....	.....	765	625	160	30	14,649 50

RECAPITULATION

Showing the Number of Vessels and Boats, Nets and all Fishing Materials, &c., in the Gulf Division, Province of Quebec, for the year of 1899.
COUNTY OF BONAVENTURE.

Number.	FISHING VESSELS AND BOATS.						FISHING GEAR OR MATERIALS.									
	Vessels.			Boats.			Gill-Nets.					Seines.				
	Number.	Tonnage.	Value. \$	Men.	Number.	Value. \$	Number.	Fathoms.	Value. \$	Number.	Fathoms.	Value. \$	Number.	Value. \$	Number.	Value. \$
1	Restigouche				30	600	100	25	5006	4000						1
2	Bonaventure	1	21		1086	15655	1965	3205	62475	31200	103	2570			171	1570
3	Port Daniel				495	16260	790	875	15050	11321	62	1785			245	2605
	Totals	1	21	4	1611	32515	2855	4105	82525	46521	165	4355			416	4175

COUNTY OF GASPE.

Number.	Division.	1	52	1300	10	865	36289	22401795	37656	17025	58	1799	1327		343	3672
1	Grand River					1142	21583	13771025	27973	15498	52	1705	1500			
2	Gaspé Bay					301	5920	416 512	14045	7285	5	170	150			
3	Mont Louis					214	4280	304 281	6777	4215						
4	Ste. Anne des Monts					381	13350	9901968	49200	11708	12	1555	3800	1	400	
5	Magdalen Islands South	3	43	1300	13		4075	402 493	12325	2487				6	1400	
6	Magdalen Islands North					163										
	Totals	4	95	2600	23	3066	90497	57296074	147976	58218	127	5229	6777	7	1800	3672

COUNTY OF SAGUENAY.

Number.	Division.	5	90	2600	10	135	2700	141 230	6900	6900	2	160	160	1	300	
1	Godbout					53	3925	111 67	7098	6515	7	445	735			
2	Moisie	3	107	2150	15	404	16984	901 75	8350	6150	59	2271	3755	7	2600	
3	Mingan	7	287	3500	42	79	8000	147 131	4340	3610	12	925	800			
4	Natashquan	4	88	2000	33	19	840	31 27	1250	500	4	200	175			
5	Romaine	1	25	500	4	211	5580	338 152	7000	4650	35	4800	3200	36	13750	
5	St. Augustin					259	9280	513 66	8030	4950	36	2560	5110	56	14550	
7	Bonne Espérance	4	273	4400	23	39	1510	72 69	1490	625	8	400	325			
8	Anticosti															
	Totals	24	870	15150	127	1199	48819	2254 817	44458	33900	163	11761	14260	100	31200	

RECAPITULATION.
Showing the Number of Vessels and Boats, Nets and all Fishing Materials, &c.—Gulf Division, Province of Quebec—Continued.
COUNTY OF BONAVENTURE—Continued.

Number.	Divisions.	FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed.		Freezers and Icehouses.		Smoke & Fish Houses.		Piers and Wharfs.	
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1	Restigouche	50	1000														
3	Bonaventure			3250	1625	5	890	5100	2550	93		30	670	179	21685	2	10000
3	Port Daniel	3	100	1630	1440	6	2250	10650	5750	261		6	1000	40	1350		
	Totals.....	53	1100	4880	3065	11	3140	15750	8300	354		36	1670	219	23035	2	10000

COUNTY OF GASPÉ—Continued.

Number.	Divisions.	FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed.		Freezers and Icehouses.		Smoke & Fish Houses.		Piers and Wharfs.	
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1	Grand River.....	3	150	4363	1274	15	5100	30800	14590	434		13	1520	109	60750	10	3450
2	Gaspé Bay			3893	1465	10	3910	8550	5500	150		2	500	66	13000	16	4050
3	Mont Louis			833	833	2	800	2100	1050	20				12	2000	2	1000
4	Ste. Anne des Monts			429	429												
5	Magdalen Islands South.....			1970	520	32	16005	42550	25330	647		4	200			8	1900
6	Magdalen Islands North.....			802	201	55	17876	47585	24107	968						21	3940
	Totals. ..	3	150	12290	4722	114	43691	131585	70577	2219		19	2220	187	75750	57	14340

COUNTY OF SAGUENAY—Continued.

Number.	Divisions.	FISHING GEAR OR MATERIALS.				LOBSTER PLANT.				OTHER FIXTURES USED IN FISHERIES.							
		Smelt Nets		Hand Lines.		Canneries.		Traps.		No. of hands employed.		Freezers and Icehouses.		Smoke & Fish Houses.		Piers and Wharfs.	
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1	Godbout	2	60	260	78	1	400	100	30	7		21	400	2	50	1	250
2	Moisie			552	276							1	500	32	1650		500
3	Mingan			1733	823	2	300	400	200	9		1	700	64	14200	3	5900
4	Natashquan			440	220	5	1590	1760	880	44				69	13900	12	2000
5	Romane			70	35	1	50	200	100	4				6	250	3	30
6	St. Augustin			742	186	13	2490	6100	3050	106				64	3800	52	2000
7	Bonne Espérance			1044	337	4	210	1450	725	18				48	9870	41	7340
8	Anticosti.....			148	68	4	500	2000	1000	30				25	900	1	500
	Totals.....	2	60	4989	2023	30	5450	12010	5985	218		23	1600	310	44620	137	18520

RECAPITULATION

Showing the Kinds, Quantities and Value of Fish caught in the County of Bonaventure, for the Year 1899—Continued.

Number.	DIVISIONS.	KINDS OF FISH.													Number.
		Salmon, fresh, lbs.	Salmon, salted, bpls.	Herring, salted bpls.	Herring, fresh, lbs.	Herring, smok-ed, lbs.	Mackerel, salt-ed, bpls.	Lobsters, pre-served in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, bpls.	Haddock, fresh, lbs.	Haddock, dried, lbs.	Hake, dried, cwt.	
1	Restigouche.	35000		75	9500				75						
2	Bonaventure.	71950		4380	73400	101000		18720	50	13035	19	52500	140	180	
3	Port Daniel.	27188		3820		5500		73908		12350	51		765		
Total.		134138		8275	82900	106500		92628	125	25385	70	52500	905	180	

COUNTY OF GASPÉ—Continued.

Number.	DIVISIONS.	KINDS OF FISH.										Number.		
		Salmon, fresh, lbs.	Salmon, salted, bpls.	Herring, salted bpls.	Herring, fresh, lbs.	Herring, smoked, lbs.	Mackerel, salted, bpls.	Lobsters, preserved in cans, lbs.	Lobsters, fresh in shell, cwt.	Cod, dried, cwt.	Cod tongues and sounds, bpls.	Haddock, fresh, lbs.	Haddock, dried, lbs.	Hake, dried, cwt.
1	Grand River.....	46125	.....	4860	.....	2000	.....	148594	.....	59259	44	.....	455	.....
2	Gaspé Bay.....	75700	.....	3101	.....	.....	.....	39760	.....	24120	16	.....	.....	.....
3	Monts Louis.....	7920	.....	1965	.....	.....	.....	2500	.....	11450	19	.....	.....	.....
4	Ste. Anne des Monts.....	21320	.....	3526	.....	.....	.....	.....	.....	3118	.....	1010	.....	.....
5	Magdalen Islands South.....	.....	.....	7060	.....	.....	3253	280748	.....	6731	.....	.....	.....	.....
6	Magdalen Islands North.....	.....	.....	2234	.....	.....	2137	358752	.....	1329	.....	.....	.....	.....
Total		151065	22746	2000	5390	830354	106007	79	1010	455

COUNTY OF SAUGENAY—Continued.

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SHOWING the Kinds, Quantities and Value of Fish caught in the County of Bonaventure, for the Year 1899—Continued.

Number.	DIVISIONS.	KINDS OF FISH.											TOTAL VALUE OF ALL FISH.	Number.
		Halibut, lbs.	Trout, lbs.	Shad, brls.	Smelts, lbs.	Eels, brls.	Tom cod or frost fish, lbs.	Squid, brls.	Coarse and mixed fish, brls.	Fish oil, galls.	Fish as bait, brls.	Fish as manure, brls.			Seal skins, No.
1	Restigouche.....	5975	7000	.....	273000	25	45000	.....	.....	.....	250	.....	\$ cts. 24,745 00	1
2	Bonaventure.....	5975	21600	.....	.....	93	1700	11	4359	3434	38400	.....	122,863 20	2
3	Port Daniel .....	.....	3000	.....	15500	...	.....	915	7300	2950	6100	.....	102,214 20	3
	Totals.....	5975	31600	.....	288500	118	46700	926	11659	6384	44750	.....	249,822 40	

COUNTY OF GASPÉ—Continued.

[illegible]

COUNTY OF SAGUENAY--Continued.

1	Godbout.....	8660	900	100	2000	.....	.....	10	.....	2180	81	26	410	18,978	00	1
2	Moisie.....	6228	2524	.....	.....	.....	.....	.....	.....	1190	385	.....	125	66,655	35	2
3	Mingan.....	54500	.....	.....	.....	.....	.....	178	.....	17540	8725	1500	944	120,660	50	3
4	Natashquan.....	7000	1600	.....	1200	9	.....	.....	160	4190	1200	.....	485	31,610	85	4
5	Romaine.....	3500	2700	.....	.....	.....	.....	.....	.....	590	150	.....	70	5,909	50	5
6	St. Augustin.....	.....	14750	.....	.....	.....	.....	.....	.....	13442	2145	.....	1556	72,286	10	6
7	Bonne Espérance.....	1900	6600	.....	.....	.....	.....	.....	.....	7743	1520	.....	325	63,087	15	7
8	Anticosti.....	3250	.....	.....	.....	.....	.....	.....	.....	765	625	160	30	14,649	50	8
Totals.....		85038	29074	100	3200	9	.....	188	160	47640	14831	1686	3945	393,836	95	

RETURN showing the Number, Tonnage and Value of Vessels and Boats and the Quantity
the Gulf Division, Province

Number.	COUNTIES.	FISHING VESSELS AND BOATS.						FISHING GEAR OR										
		Vessels.				Boats.		Gill Nets.			Seines.			Trap Nets	Trawls.			
		Number.	Tonnage.	Value.	Men.	Number.	Value.	Men.	Number.	Fathoms.	Value	Number.	Fathoms.	Value.	Number.	Value.	Number.	Value.
				\$			\$				\$			\$		\$		\$
1	Bonaventure.	1	21	350	4	1611	32515	2855	4105	82525	46521	165	5250	4355	.....	.....	416	4175
2	Gaspé.....	4	95	2600	23	3066	90497	5729	6074	147976	58218	127	5229	6777	7	1800	343	3672
3	Saguenay....	24	870	15150	127	1199	48819	2254	817	44458	33900	163	11761	14260	100	31200	....	.....
Totals..		29	986	18100	154	5876	171831	10828	10996	274959	138639	455	22240	25392	107	33000	759	7847

RETURN showing the kinds and quantities of Fish and Fish

Number.	COUNTIES.	SALMON.		HERRING.			MACKEREL		LOBSTERS.		COD.	
		Fresh.	Salted	Salted.	Fresh.	Smoked.	Fresh.	Salted.	Preserved in Cans.	Fresh in Shell.	Dried.	Tongues and Sounds.
		Lbs.	Brls.	Brls.	Lbs.	Lbs.	Lbs	Brls.	Lbs.	Cwt	Cwt.	Brls
1	Bonaventure.....	134138	.....	8275	82900	106500	....	...	92628	125	25385	70
2	Gaspé.....	151065	.	22746	.....	2000	....	5390	830354	...	106007	79
3	Saguenay.....	480194	176	3006	.....	...	....	1	136676	...	49712	89
Totals. ...		765397	176	34027	82900	108500	....	5391	1059658	125	181104	238

SESSIONAL PAPER No. 22

and Value of all Fishing Materials and other fixtures used in the Fishing Industries in of Quebec, for the year 1899.

MATERIALS.				LOBSTER PLANT.					OTHER FIXTURES USED IN FISHERIES.									
Smelt Nets		Hand Lines		Canneries.		Traps.		No. of Men Employed.	Freezers and Ice houses		Smoke and Fish Houses.		Piers and Wharfs.		Tugs, Steamers and Smacks.		Number.	
Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.		
	\$		\$		\$		\$			\$		\$		\$		\$		
53	1100	4880	3065	11	3140	15750	8300	354	36	1670	219	23035	2	10000	.....	.....	1
3	150	12290	4722	114	43691	131585	70577	2219	19	2220	187	75750	57	14340	6	680	2	
2	60	4989	2023	30	5450	12010	5985	218	23	1600	310	44620	137	18520	1	600	3	
58	1310	22159	9810	155	52281	159345	84862	2791	78	5490	716	143405	196	42860	7	1280		

Products in the Gulf Division, Province of Quebec.

HADDOCK.		HAKE.															TOTAL VALUE OF ALL FISH.		Number.
Fresh.	Dried.	Dried.	Smoked.	Halibut.	Trout.	Shad.	Smelts.	Eels.	Tom Cod or Frost Fish.	Squid.	Coarse and Mixed Fish.	Fish Oil.	Fish as Bait.	Fish as Manure.	Seal Skins.				
Lbs.	Cwt	Cwt	Lbs	Lbs.	Lbs	Brls	Lbs.	Brls	Lbs.	Brls	Brls	Galls.	Brls.	Brls	No.	\$	cts.		
52500	905	180	....	5975	31600	....	288500	118	46700	926	....	11659	6384	44750	....	249,822	40	1
1010	455	....	....	59930	12400	....	115000	174	.....	3919	....	86485	17827	4435	200	879,919	60	2
.....	....	....	....	85038	29074	100	3200	9	.....	188	160	47640	14831	1686	3945	393,836	95	3
53510	1360	180	....	159943	73074	100	406700	301	46700	5032	160	145784	39042	50871	4145	1,523,578	95	

RECAPITULATION.

STATEMENT showing the Yield and Value of Fisheries of the Gulf Division, P.Q.,
for the Season of 1899.

Description.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Salmon, fresh in ice	Lbs.	765,397	0 20	153,079 40
" salted	Brls.	176	15 00	2,640 00
Herring "	"	34,027	4 00	136,108 00
" fresh	Lbs.	82,900	0 01	829 00
" smoked	"	108,500	0 02	2,170 00
Mackerel, salted	Brls.	5,391	15 00	80,865 00
Lobsters, canned	Lbs.	1,059,658	0 20	211,931 60
" fresh, (whole)	Cwt.	125	5 00	625 00
Cod, salted	"	181,104	4 00	724,416 00
" tongues and sounds, salted	Brls.	238	10 00	2,380 00
Haddock, fresh	Lbs.	53,510	0 03	1,605 30
" salted	Cwt.	1,360	3 00	4,080 00
Hake, salted	"	180	2 25	405 00
Halibut, fresh	Lbs.	150,943	0 10	15,094 30
Trout, fresh	"	73,074	0 10	7,307 40
Shad, salted	Brls.	100	10 00	1,000 00
Smelts, fresh in ice	Lbs.	406,700	0 05	20,335 00
Eels, salted	Brls.	301	10 00	3,010 00
Tommy cod, fresh	Lbs.	46,700	0 05	2,335 00
Squid	Brls.	5,032	4 00	20,128 00
Coarse and mixed fish	"	160	2 00	320 00
Fish oils	Galls.	145,784	0 30	43,735 20
Fish as bait	Brls.	39,042	1 50	58,563 00
Fish as manure	"	50,871	0 50	25,435 50
Seal skins	Pieces.	4,145	1 25	5,181 25
Total for 1899				1,523,578 95
" 1898				1,381,226 10
Increase for 1899				142,352 85

SESSIONAL PAPER No. 22

RECAPITULATION

SHOWING Number of Men, Vessels and Boats, and Value of Material Employed in
Gulf Division Fisheries, Season of 1899.

Description.	Value.	
	\$	cts.
29 vessels of 986 tons, manned by 154 men.....	18,100	00
5,876 boats fished by 10,828 men.....	171,831	00
274,959 fathoms of gill.net	138,639	00
455 seines of 22,240 fathoms... ..	25,392	00
107 trap-nets.	33,000	00
759 trawl lines.....	7,847	00
58 smelt nets.....	1,310	00
22,159 hand lines.....	9,810	00
155 lobster canneries employing 2,791 men.....	52,281	00
159,345 lobster traps.....	84,862	00
78 icehouses and freezers.....	5,490	00
716 smoke and fish houses.....	143,405	00
196 private piers and wharfs.....	42,860	00
7 tugs and smacks	1,280	00
Total value.....	736,107	00

RETURN of the Number of Fishermen, the Number of Boats, Nets, &c., and the
Cape Chat to Point Lévis

Number.	DISTRICTS.	FISHING MATERIALS.						
		Boats.			Gill Nets.		Brush or Eel Weirs.	
		Number.	Value.	Men.	Number.	Fathoms.	Number.	Value.
			\$					\$
1	Capucins	17	136	21	18	450	216	.....
2	Petits Mechins	21	210	30	26	650	312	.....
3	Grands Mechins	26	260	35	37	925	444	.....
4	Ruisseau à Sem.	9	72	11	12	300	144	.....
5	Grosses Roches	24	208	36	25	600	300	.....
6	Ste. Félicité	49	392	56	62	1580	744	5 100
7	Matane	12	138	16	16	374	170	7 200
8	Rivière Blanche	22	378	24	36	895	400	.....
9	Sandy Bay	57	670	58	102	2469	1187	.....
10	Métis	7	100	6	2	50	30	5 450
11	Ste. Flavie	11	56	11	10	220	94	.....
12	Ste-Luce	2	10	11	3	204	450	11 600
13	Rimouski	8	130	28	1	60	30	18 1615
14	Sacré-Coeur and Islet à Canuel	9	234	14	.....	.....	.....	11 580
15	Rivière Hatée . . . . .	.....	.....	7	.....	.....	.....	3 160
16	Bic and Cap à L'Original*	3	14	74	.....	.....	.....	7 146
17	St. Simon, St. Fabien and St. Mathieu	4	19	7	1	4	10	7 146
18	Trois Pistoles*	9	54	9	.....	.....	.....	35 380
19	Isle Verte	40	1503	36	.....	.....	.....	21 2810
20	Cacouna	17	140	18	.....	.....	.....	12 1120
21	Rivière du Loup*	5	25	5	12	128	72	5 510
22	St. André and Notre Dame du Portage	8	78	25	.....	.....	.....	19 1090
23	Kamouraska	8	40	8	.....	.....	.....	8 520
24	St. Denis	12	60	16	.....	.....	.....	17 525
25	Rivière Ouelle*	40	200	55	1	30	10	45 2000
26	Ste. Anne de la Pocatière	8	40	8	.....	.....	.....	20 900
27	St. Roch	10	30	16	.....	.....	.....	16 678
28	St. Jean Port Joli	21	63	21	.....	.....	.....	23 862
29	L'Islet	1	15	19	.....	.....	.....	20 695
30	Ile aux Grues and Ile aux Oies	5	25	15	.....	.....	.....	15 1575
31	Cap St. Ignace	10	50	10	8	190	36	25 825
32	St. Thomas	7	30	10	4	360	1400	2 255
33	Berthier	10	50	10	7	470	2300	42 3400
34	St. Valier	9	115	9	6	570	2900	6 6050
35	St. Michel	8	40	8	4	345	2100	1 100
36	Beaumont	8	40	8	7	660	4465	1 200
37	Lévis and St. Nicholas	17	94	17	9	602	3750	.....
Totals		534	£719	768	409	12136	21564	407 28492
Values			\$					

* NOTE.—In Nos, 16, 18, 21, add 12, 2 and 21 seals respectively. In No. 25 include 12 beluga (white whales) value \$213.

SESSIONAL PAPER No. 22

Quantity of Fish Caught on the South Shore of the St. Lawrence River from Province of Quebec, for the Year 1899.

KINDS OF FISH.															VALUE.	Number.
Salmon, lbs.	Shad, lbs.	Herring, salted, brls.	Herring, fresh, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.	Cod, lbs.	Halibut, lbs.	Fish Oil, galls.		
															\$ cts.	
		95	9000								850	35000	900	2900	3,188 50	1
175		240	3500								800	45000	800	350	3,473 00	2
870		250	10000		350						12000	45000	1700	325	3,946 50	3
		70	6000								10000	30000	1300	180	2,124 00	4
		90	11000								15000	45000	1000	360	3,078 00	5
		650	40000							16	27000	45000	2500	370	5,929 00	6
		393	1200							130	10000	5274	1950	19	2,538 40	7
		447	8950								9500	11400	800	90	2,649 50	8
		1979	111600										3000		9,332 00	9
920		75	383000						200	15	3000				4,401 00	10
		2	8600										450		139 00	11
855		80	37400						200		579500				6,672 00	12
1015		100	3936300						3200	5	42400				40,597 00	13
490		759	2970000							230	34500				33,869 00	14
525		50	76000							13	7000				1,174 00	15
180	25	30	95400								2600			36	1,163 30	16
385	45	20	80800		4100			100	1250		7600				1,534 70	17
960			148000					200		11	2700			5	1,748 00	18
1990	195	75	301300					2130	250	400	426150				9,327 00	19
670	195	60	350000					400	280	797	93000				7,247 50	20
280	750	50	5000					1097		155	4800			63	974 97	21
10	50	50	207000					2470	9355	504	26800				4,764 50	22
	3500	15	4000					3400	3500	1340	1000				4,754 00	23
100		25	22500						5855	396	4500				1,929 30	24
200	1000	30	35000					2500	35000	15	3000			550	3,108 00	25
					15000				25190		4600				3,057 40	26
									15050		6150				964 50	27
					15000				13600		5400				2,370 00	28
				100		100	200	200	10900		4100				733 00	29
				15000					17250		4425				2,279 25	30
				756		700	330	10800	6960		23000				1,428 74	31
8	2500			1960		1000	2350	20000	5200		2500				2,046 90	32
16	230			1295		995	880	17000	59150		8550				4,898 70	33
280	3075			10430		9745	3875	17900	54300		6200				6,442 25	34
285	725			1575		400	575	4500	39000		5400				2,951 25	35
700	2600			2500		4500	2750	2000	58000		5600				4,649 50	36
449	2825			3650		4375	3150	7850	64700		5400				5,465 80	37
11363	17715	5635	8861550	37268	34450	21815	14110	92547	428390	4027	1405025	261674	14400	5248	.....
2273	1063	22540	88616	2981	3445	1745	705	5553	25703	12081	14050	13084	1440	1574	196,949 46	

RETURN of the Number and Value of Boats, Nets, &c., the Quantity and Value of
Province of Quebec,

Number.	DISTRICTS.	FISHING MATERIALS.						
		Boats.			Gill-Nets.		Brush or Fel Weirs.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.
	<i>North Shore St. Lawrence.</i>		\$				\$	\$
1	Island of Orleans.....			78	12	4400	2000	90
2	County of Montmorency.....			35				17
3	County of Charlevoix.....			23	4	160	60	110
	<i>Saguenay District.</i>							
4	St. Firmin.....	6	250	7				5
5	Tadoussac.....	6	220	8	4	500	250	1
6	Bergeronnes.....	4	80	4	4	400	225	
7	Bon Désir.....	1	20	1	1	75	50	
8	Escoumains.....	7	120	7	5	400	350	2
9	Sault au Mouton.....	2	20	2				2
10	Mille Vaches.....	6	90	6	1	100	75	5
11	Portneuf.....	6	100	6	4	350	250	2
12	Sault au Cochon.....	2	20	2	1	100	60	1
13	Islets Jérémie.....	6	90	6	6	400	350	
14	Bersimis.....	2	20	2	1	80	50	1
15	Inland Waters.....							
16	*Lake St. John District.....			100				
	Totals.....	48	1030	287	43	6965	3720	236
	Values.....\$							

*In No. 16, include 98,000 lbs. ouananiche and 7,500 lbs. pike. Mostly estimated.

SESSIONAL PAPER No. 22

Fish on the North Shore of the St. Lawrence, from Quebec City to Bersimis, for the Year 1899.

KINDS OF FISH.											Beluga (white whales) No.	Beluga oil, galls.	TOTAL VALUE.	Number.
Salmon, lbs.	Shad, lbs.	Herring, salted, brls.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Sturgeon, lbs.	Eels, lbs.	Sardines, brls.	Mixed and coarse fish, lbs.				
													\$ cts.	
200	250	.....	4300	.....	4200	2700	12800	120500	.....	3000	.....	.....	8,898 00	1
.....	.....	.....	2500	3500	2100	1100	2600	24300	..	4200	.....	.....	2,429 00	2
1500	100	20	.....	59000	.....	.....	.....	6000	50	16000	9	450	7,127 00	3
1400	.....	20	.....	2300	.....	.....	.....	.....	5	50000	110	5500	3,195 00	4
22500	.....	.....	.....	3200	.....	.....	.....	.....	.....	23000	71	3550	6,399 00	5
18400	.....	.....	.....	1100	.....	.....	.....	.....	.....	.....	.....	.....	3,790 00	6
1950	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	390 00	7
12100	.....	22	.....	1200	.....	.....	.....	.....	11	35000	25	1250	3,486 00	8
.....	.....	26	.....	500	.....	.....	.....	.....	9	12000	.....	.....	301 00	9
3800	.....	52	.....	2200	.....	.....	.....	.....	16	48000	.....	.....	1,716 00	10
12600	.....	20	.....	2300	.....	.....	.....	.....	5	19600	.....	.....	3,041 00	11
2800	.....	5	.....	200	.....	.....	.....	.....	.....	.....	.....	.....	600 00	12
17400	.....	.....	.....	300	.....	.....	.....	.....	.....	.....	.....	.....	3,510 00	13
2400	.....	10	.....	1200	.....	.....	.....	.....	3	4400	.....	.....	693 00	14
12000	.....	.....	.....	19700	.....	.....	.....	.....	.....	1000	.....	.....	4,380 00	15
...	.....	.....	12,500	17000	.....	38500	.....	.....	.....	50000	.....	.....	11,365 00	16
109050	350	175	19300	113700	6300	42300	15400	150800	99	266200	215	10750	.....
21810	21	700	1544	11370	504	2115	924	9048	297	2662	860	3225	61,260 00	

RETURN of the Number of Fishermen, Value of Boats, Nets, &c., the Quantity and
Ottawa, in the Province of

Number.	DISTRICTS.	FISHING MATERIALS.										
		Boats.			Gill Nets.			Seines.			Hoop Nets.	
		Number.	Value.	Men.	Number.	Fathoms.	Value.	Number.	Fathoms.	Value.	Number.	Value.
		\$				\$			\$		\$	
1	Megantic Lake and vicinity	Angling, trolling and nightlines.										
2	Sherbrooke and vicinity											
3	Magog and Brome											
4	Missisquoi Bay	12	140	40	"	"	"	14	1200	700		
5	* Richelieu River	80	900	80				20	400	300	74	740
6	Lake St. Francis	25	300	38	20	340	70				20	200
7	Lake St. Louis	70	1050	125	10	180	35	15	600	300		
8	Montreal and vicinity	50	500	90	2	40	10	25	700	450		
9	Verchères and vicinity	88	880	90				20	520	400	6	54
10	Richelieu County	40	320	65				8	120	90	30	150
11	Yamaska County, including Yamaska and St. Francis Rivers	110	1140	180	20	400	80	61	580	440	120	1200
12	Nicolet County	45	500	45	8	140	22	18	600	300	10	100
13	Portneuf to St. Maurice	20	400	80				7	70	40		
14	Maskinongé and Berthier	60	500	60	3	70	10	16	320	130	30	100
15	Terrebonne and Laval	25	200	50	10	170	75	6	120	30	5	25
16	Lake Two Mountains	140	1900	160	76	1160	165					
17	Ottawa River	105	1800	110	300	9000	1000					
18	Gatineau Lakes and vicinity	Angling, trolling and night lines										
	Totals	870	10590	1213	449	11500	1467	210	5230	3180	295	2569
	Values		\$									

* In No. 5 add 8 weirs for eels valued at \$45,000.

SESSIONAL PAPER No. 22

Value of Fish, &c., in the Inland District extending from Quebec City to Upper Quebec, for the Year 1899:

KINDS OF FISH.													TOTAL VALUE.	Number.
Shad, lbs.	Whitefish, lbs.	Trout, lbs.	Bass, lbs.	Pickarel, lbs.	Pike, lbs.	Maskinongé, lbs.	Sturgeon, lbs.	Eels, lbs.	Perch, lbs.	Catfish, lbs.	Mixed and coarse fish, lbs.	Tom cods, bush.		
													\$ cts.	
.....	16500	110200	4300	30400	30200	1200	1000	2500	5400	.....	40600	.....	16,262 00	1
.....	800	10400	6500	20200	.....	.....	.....	1500	5000	.....	7000	.....	2,944 00	2
.....	600	.....	.....	45500	.....	.....	600	.....	.....	.....	75000	.....	3,109 00	3
.....	.....	.....	5800	6040	21250	100	4000	93930	19750	250	89000	.....	8,985 30	4
.....	.....	.....	2500	7500	8100	4000	13000	5500	6800	6200	17500	.....	2,752 00	5
.....	.....	.....	9100	13800	14800	7600	204900	31500	49300	23900	203000	.....	20,637 00	7
4000	.....	.....	5800	8760	12600	4800	13800	16000	3500	3000	25000	.....	4,137 00	8
1800	.....	.....	3330	12800	12400	1670	2400	14000	15130	600	64700	.....	3,707 50	9
3900	.....	.....	3400	37900	41700	1450	15000	13000	43350	.....	153700	.....	8,673 50	10
4000	2000	4000	10500	33000	49000	17000	11000	28500	3000	91000	190000	.....	12,450 00	11
20000	1000	500	6200	3000	3200	1500	6710	24200	8200	10200	120000	.....	5,698 60	12
10000	2000	17000	1000	6700	2000	.....	8000	7000	2000	.....	21000	39000	27,525 00	13
.....	.....	9000	.....	11000	50000	20000	17000	5500	1000	19600	103000	.....	7,452 00	14
41000	.....	80000	600	3000	3400	500	1000	1200	4800	1200	25200	.....	9,162 00	15
2000	.....	.....	3100	8300	12000	6600	8500	5400	45000	92300	111400	.....	6,803 00	16
.....	.....	.....	43200	53300	59260	24000	68200	20000	43200	58500	90200	.....	18,589 00	17
.....	8200	98400	15100	13500	.....	.....	.....	.....	.....	.....	8000	.....	12,459 00	18
49800	31100	329500	120430	314700	319850	90420	375110	269730	255430	306750	1344300	39000	.....
2988	2488	32950	9634	15735	12794	5425	22507	16,184	7663	6135	13443	23400	171,345 90	

RECAPITULATION

Of the Yield and Value of the Inland Fisheries of Quebec (exclusive of the Gulf Division) for 1899.

Kinds of Fish.		Quantity.	Price.	Value.
			\$ cts.	\$ cts.
Salmon	Lbs.	120,413	0 20	24,082 60
Trout	"	477,650	0 10	47,765 00
Ouaniche	"	98,000	0 06	5,880 00
Whitefish	"	87,668	0 08	7,013 44
Herring, fresh	"	8,861,550	0 01	88,615 50
" salted	Brls.	5,810	4 00	23,240 00
Shad	Lbs.	67,865	0 06	4,071 90
Sardines	Brls.	4,126	3 00	12,378 00
Bass	"	148,545	0 08	11,883 60
Pickrel	"	371,110	0 05	18,555 50
Pike	"	327,450	0 04	13,098 00
Maskinongé	"	90,420	0 06	5,425 20
Sturgeon	"	483,057	0 06	28,983 42
Eels	"	848,920	0 06	50,935 20
Cod, fresh	"	261,674	0 05	13,083 70
Halibut	"	14,400	0 10	1,440 00
Tom cod	Bush.	39,000	0 60	23,400 00
Perch	Lbs.	255,430	0 03	7,662 90
Catfish	"	306,750	0 02	6,135 00
Coarse fish	"	3,015,525	0 01	30,155 25
Seal skins	No.	35	1 25	43 75
Beluga skins (or white whales)	"	227	4 00	908 00
Fish oil	Galls.	15,998	0 30	4,799 40
Total for 1899				429,555 36
" 1898				380,214 25
Increase				49,341 11

STATEMENT

Of the Fishing Material in the Province of Quebec (Gulf Division not included), 1899.

Articles.	Value.	Total Value.
	\$	\$
1,452 fishing boats (2,268 men)	17,339	
901 gill-nets (30,601 fathoms)	26,751	
210 seines (5,230 fathoms)	3,180	
643 brush or eel weirs.	48,732	
295 hoop-nets.	2,569	
70,740 hook or night lines	1,224	
		99,795
55 freezers and icehouses		3,505
Total value		103,300

SESSIONAL PAPER No. 22

RECAPITULATION

OF the Yield and Value of the Fisheries in the whole Province of Quebec, for the
Year 1899.

Kinds of Fish.	Quantity.	Rate.	Value.	Total Value.
		\$ cts.	\$ cts.	\$ cts.
Cod, dried..... Cwt.	183,720	4 00	737,499 70	
" tongues and sounds... Brls.	238	10 00	2,380 00	
				739,879 70
Haddock, dried..... Cwt.	1,360	3 00	4,080 00	
" fresh..... Lbs.	53,510	0 03	1,605 30	
				5,685 30
Hake, dried..... Cwt.	180	2 25		405 00
Tom cod..... Lbs.	1,216,700			25,735 00
Halibut..... "	165,343	0 10		16,534 30
Salmon, fresh..... "	885,810	0 20	177,162 00	
" salted..... Brls.	176	15 00	2,640 00	
				179,802 00
Trout..... Lbs.	550,724	0 10		55,072 40
Ouananiche..... "	98,000	0 06		5,880 00
Whitefish..... "	87,668	0 08		7,013 44
Smelts..... "	406,700	0 05		20,335 00
Herring, salted..... Brls.	39,837	4 00	159,348 00	
" fresh..... Lbs.	8,944,450	0 01	89,444 50	
" smoked..... "	108,500	0 02	2,170 00	
				250,962 50
Sardines..... Brls.	4,126	3 00		12,378 00
Shad..... Lbs.	87,865	0 06		5,071 90
Pike..... "	327,405	0 04		13,098 00
Maskinonge..... "	90,420	0 06		5,425 20
Eels, fresh..... "	848,920	0 06	50,935 20	
" salted..... Brls.	301	10 00	3,010 00	
				53,945 20
Perch..... Lbs.	255,430	0 03		7,662 90
Pickrel..... "	371,110	0 05		18,555 50
Black Bass (achigan)... "	148,545	0 08		11,883 60
Mackerel, salted..... Brls.	5,391	15 00		80,865 00
Sturgeon..... Lbs.	483,057	0 06		28,983 42
Lobsters, preserved in cans..... "	1,059,658	0 20	211,931 60	
" fresh in shell..... Cwt.	125	5 00	625 00	
				212,556 60
Squid..... Brls.	5,032	4 00		20,128 00
Catfish..... Lbs.	306,750	0 02		6,135 00
Coarse fish or mixed..... "	3,015,525	0 01	30,155 25	
"..... Brls.	160	2 00	320 00	
				30,475 25
Seal skins..... No.	4,180	1 25		5,225 00
Beluga (white whales)... "	227	4 00		908 00
Fish oil..... Galls.	161,782	0 30		48,534 60
" for bait..... Brls.	39,042	1 50		58,563 00
" as manure..... "	50,871	0 50		25,435 50
Total for 1899.....				1,953,134 31
" 1898.....				1,761,440 35
Increase.....				191,693 96

RECAPITULATION

Of the Fishing Vessels, Boats, Nets, &c., in the whole Province of Quebec, for the Year 1899.

Articles.	Value.	Total.
	\$ cts.	\$ cts.
29 vessels (986 tons)	18,100 00	
7,328 fishing boats	189,170 00	
11,897 gill-nets (305,560 fathoms).....	165,390 00	
665 seines (27,470 fathoms).....	28,572 00	
107 trap-nets.....	33,000 00	
643 weirs (brush or eel).....	48,732 00	
295 hoop-nets.....	2,569 00	
58 smelt nets.....	1,310 00	
hand lines and night lines .	11,034 00	
759 trawls	7,847 00	505,724 00
155 lobster canneries (2,791 hands)	52,281 00	
159,345 lobster traps.....	84,862 00	137,143 00
133 freezers and icehouses.....	8,995 00	
716 smoke and fish houses.....	143,405 00	
196 piers and wharfs (fishing).....	42,860 00	
7 smacks and steamers .	1,280 00	196,540 00
Total value.....		839,407 00

STATEMENT of Men engaged in the Fishing industries of Quebec, 1899.

Men.	Number.
Men in fishing vessels	154
" boats.....	13,096
Persons in lobster canneries	2,791
Total.....	16,041

SESSIONAL PAPER No. 22

APPENDIX No. II

REPORT

ON

FISH-CULTURE OPERATIONS

IN THE

DOMINION OF CANADA

1900.

REPORT BY PROFESSOR EDWARD E. PRINCE, COMMISSIONER AND
GENERAL INSPECTOR OF FISHERIES FOR THE DOMINION
OF CANADA, FOR THE YEAR 1900.

OTTAWA, December 31, 1900.

To the Honourable
Sir LOUIS H. DAVIES, K.C.M.G., &c., &c.
Minister of Marine and Fisheries,
Ottawa.

SIR,—I have the honour to submit my annual report upon the operations carried on in connection with artificial fish-culture in the Dominion of Canada for the twelve months now ending. From this report, and from the several reports of the officers in charge of the hatcheries under the Department's control, it is apparent that very decided success has marked the work of the year, while in obedience to the rapidly increasing public interest in fish propagation and fish preservation, important steps have been taken to expand the scope of the work as a whole. The onward progress of fish-culture in Canada has been such that it is no exaggeration to say, that the Dominion occupies a leading place in this important enterprise. Certainly the disadvantages and failures which have chequered the development of artificial fish-propagation in many countries, have been practically unknown in the work conducted under this Department's auspices during the last thirty years. This is shown by the small percentage, in reality an inappreciable quantity, of fry which are deformed and unhealthy, as well as in the general absence of fungus and of so-called embryonic dropsy. In an art which involves so many processes, each demanding special skill and care, the procuring of eggs, the care of them after fertilisation and before transference to the hatchery, the transportation of the newly vivified eggs and laying them down in the incubation tanks, their proper care while undergoing the lengthy process of incubation, besides cleansing, picking &c., and finally the many important stages after the fry have hatched out and are being distributed, it is necessary to ensure the greatest skill and scrupulous management or the eggs to a large extent will be lost, and the fry injured and rendered sickly. It is the universal testimony of parties who have personally visited the hatcheries under this Department, or been present during the distribution and planting of the fry, that it would not be possible to greatly improve upon the efficiency of the work as carried on, or succeed in obtaining fry of the five or six species embraced in the Department's operations, more healthy, vigorous, and fitted to prove beneficial in recuperating the various waters planted with them.

Black Bass and Land-locked Salmon.

That valuable game fish, the Black Bass, has been receiving some attention during the year, and it was anticipated that a sufficient supply of advanced fry would have been available this season. The quantity at the Department's disposal was, however, insufficient, but with the means of propagation and rearing now completed under Departmental supervision it is expected that a quantity of the splendid food and game fish referred to will be ready for planting during the coming season. The details of the scheme are given on a subsequent page in this report. Rainbow trout were again hatched at Bedford, and a quantity of landlocked salmon were also incubated, though the greater portion were reserved for the Right Hon. Lord Strathcona and were sent in a semi-hatched condition to Glencoe, in Scotland. The particulars of this shipment are given later in this report.

New Hatcheries.

Last July, after much consideration and a careful analysis of various reports, official and unofficial, the Department authorized steps to be taken, towards the end of July last, for the erection of a capacious salmon hatchery in British Columbia on a site some distance up the South Thompson River, a large tributary of the Fraser River. This great stream pours into the Fraser over seventy miles below Kamloops, and it emerges from Shuswap Lake, a famous sheet of water long known as an important resort for Fraser River salmon when about to spawn. The lake is thirty-three miles above Kamloops, and about 280 miles from Vancouver or New Westminster. The building is now (December) erected and rapidly approaching the stage when hatching operations can be commenced. It is perhaps the largest and finest hatchery in the Dominion and has a capacity considerably in excess of that of the old hatchery, erected in 1884, about four miles above New Westminster on the lower Fraser. The average quantity hatched in the old institution was five or six millions; but the new hatchery will be capable of turning out easily ten million young salmon, or if necessary twelve or fourteen million eggs can be accommodated in the long tanks, nearly a hundred in number, with which the building is fitted. The old hatchery was one hundred and ten feet by forty feet wide, was two stories high, and was fitted on the lower flat with seventy-one hatching troughs each 35 feet long, 10 inches wide, and six inches deep, and calculated, at the time, to hold a thousand hatching trays, which would accommodate 3,000,000 quinnat or spring salmon ova, or 5,500,000 sockeye or blue-back salmon eggs. By doubling the trays in the troughs, a very inconvenient and risky measure, the late Superintendent of Fish-Culture estimated that he could double the quantity of eggs to be incubated in the hatchery should that be necessary. As a matter of fact the average quantity of sockeye ova hatched in the institution, during the sixteen years of its continuous operation, has been about five millions and a half per annum. By special arrangements and with extra precautions it was found possible, as in 1890, to hatch 6,640,000 young salmon, and 7,800,000 in 1894, while in the phenomenal year, 1896, the officer in charge at that time succeeded in successfully hatching on the incubating trays no less than 10,393,000 sockeye salmon. The new building, as already stated, has much greater capacity than the old one. Built on a substantial stone foundation covered and pointed with cement, and placed well above the level of Shuswap Lake, on the banks of which it is situated, there is no risk from floods if the water in the lake should rise to an unusual height. The floor is of concrete with inside drains, so that it is greatly superior to the damp wooden floor adopted in the old hatcheries, which on that account were subject to constant decay. The building is considerably larger than the former hatchery, being 169 feet by 35 feet wide and, as already stated, containing no less than 95 tanks each 25 feet long by a little over 10 inches wide and five inches deep. The supply of water from Granite Creek is obtained by the erection of a dam about 500 yards from the hatchery. The dam is substantially constructed of plank, with box, from which a pipe conveys the water, free from detritus and floating rubbish, and affords at the dam a head of no less than 10 feet. The building is a style of structure quite different from former hatchery buildings, and presents a

SESSIONAL PAPER No. 22

number of features in construction and design devised by Lieutenant-Colonel Anderson and myself after much consideration and interchange of views. While the design is simple in the extreme, the roof is divided into a main roof and two subsidiary roofs, turrets are provided for purposes of ventilation, and a spacious portico, supported by pillars, all contribute to give the building a neat and pleasing appearance. The triple roof and external walls are shingled, and the building is in many respects one of the best on the continent. There will be ample accommodation for incubating several species of fish, including the rainbow trout and the steelhead, as well as other varieties of salmonidæ, for which there is a growing demand on the part of the public, especially for stocking the numerous and famous angling waters in the province.

Work of new B. C. Hatchery.

The commercial fishes in the new B.C. hatchery, as in all the Department's hatcheries, are regarded as of prime importance, and chief attention will of course be given to valuable economic species. In the preliminary arrangements for determining the exact location, making an appropriate clearing, and securing a suitable supply of water, from the adjacent stream, the Department of Indian Affairs has most willingly and promptly done all that was possible to facilitate the matter by devoting a couple of acres (the area required) on the Indian Reserve for purposes of the hatchery site, and the Canadian Pacific Railway, through the kind offices of the President, Mr. T. G. Shaughnessy, and the General Manager, Mr. D. McNicoll, placed this Department under special obligation in the initial stages of the scheme. The completion of this important institution in the province of British Columbia is regarded on the Pacific Coast with the greatest interest generally, and substantial benefits to the vast salmon industry are looked for, in the course of a season or two. While the operations at the old hatchery were always estimated highly by those most deeply concerned in the salmon fishing and canning industries, yet it has always been felt that the Department was never able to secure the eggs of the early and most valuable runs of salmon. The later runs, while of importance, and not inferior for commercial purposes, so long as they alone were secured and millions of their fry planted annually, were thought to have had much to do with the postponement to a later period in the season of fishing and canning operations. These operations have gradually become later and later, year by year, and the fishermen and canners have generally attributed this to the fact that the hatchery filled its incubating trays with the very late runs only. All parties interested, therefore, hail with the utmost satisfaction the new system which will be carried out at the recently erected hatchery on Shuswap Lake, where early runs of parent salmon will be secured and the eggs and fry of these early fish hatched and reared in future. It has long been my desire to see a hatchery placed as near the headwaters of the Fraser River as possible, in order that eggs might be taken from the very first salmon that reach the upper spawning grounds. There are no less than seven of these important breeding grounds readily accessible from the new salmon hatchery. It is not too much to anticipate that a vast and very apparent improvement in the early runs of the salmon in the Fraser River will be accomplished after the new institution has been at work for an adequate period (two or three years at the outside). The erection of other new hatcheries was authorized during the past season.

Lobster and Salmon Hatchery, Gaspé, P.Q.

One at Gaspé, to replace the old decayed building, erected more than twenty-five years ago near the mouth of the Dartmouth River is being constructed without delay. The plan and arrangements of this building have long been out of date, and up to two or three years ago, operations were carried on with special and increasing difficulty. With the hearty concurrence of Rodolphe Lemieux, Esq., M.P., a new hatchery, presenting entirely novel features, has been decided upon, viz., a combined salmon

and lobster hatchery. In order to carry out this wholly new idea, a location had to be secured which would provide a supply of pure fresh water as well as a supply of salt-water. A suitable location at the south-east angle of Gaspé Basin was finally decided upon after I had made a personal inspection of every available site that had been brought to the Department's attention. Indeed I made an examination of all the creeks and mouths of streams emptying into the sea along the south shore of Gaspé Bay from Cape Haldimand to Mill Brook, up York River, as well as visiting certain streams on the north shore of the bay, along the north side, that is to say, of the estuary of Dartmouth River, from Peninsula, west. Neither upon that shore, nor the opposite shore of this estuary, was a site suitable for a combined salmon and lobster hatchery to be found. The old disused hatchery it may be remarked is situated upon the west shore of the estuary of the Dartmouth River.

As the stream of water which debouches into Gaspé Basin close to the new hatchery site and adjacent to the group of buildings so long associated with the great fish business of the Messrs. LeBoutellier, is very pure and regular in supply, indeed one of the residents on the spot stated it was the most constant of all the streams in the district, and could be depended upon when most other sources of water supply were frozen up; and, moreover, as sea water comes in from the open bay, and is of some depth just a short distance out from the hatchery, the success of this important experiment is assured. There are also facilities for the formation of a tidal pond, beside the hatchery, in which parent salmon can be retained until ready for spawning. Other institutions of this kind could be started at various points along the Atlantic coast should the planting of young salmon and young lobsters at Gaspé, from one hatchery, be demonstrated to prove beneficial to the local fisheries. Certainly no more suitable ground could be selected for this important experiment, as it will be possible to test, in a way not possible elsewhere the results of the planting of both species, in the course of a few seasons. One of the main difficulties in checking the results of lobster hatcheries is the extent of the area which it is attempted to stock. The same remark applies to some extent to salmon hatcheries. The Lobster Commission of 1898, of which I was chairman, received much evidence from lobster fishermen and canners, pointing to the beneficial results observed in Northumberland Straits from the department's lobster hatching operations. The schools of small lobsters, it was claimed, due to the planting of vast quantities of these young crustaceans, were noticed season after season in the Straits, and the view prevailed that the Bayview lobster hatchery, Cariboo Harbour, N.S., was greatly benefiting the lobster industry along the shores in question. If it prove feasible, some semi-hatched salmon eggs will be placed in the Gaspé hatchery in spring, so that they may go through the final stages of incubation in the new building, and be planted in the adjacent rivers, in early summer. Arrangements have also been decided upon for hatching some millions of lobsters there, probably in June or July, so that the hatchery, there is every reason to anticipate, will be in full operation during the coming season.

New C. B. Hatchery.

A third hatchery is also being erected in Inverness County, Cape Breton. An admirable site was selected by the Inspector of Fisheries and approved by influential men in the district. It is being built on a tributary of the North-east Margaree river, a river famous as a resort for salmon of the finest kind. The Margaree river was for some years seriously depleted by merciless poaching, but it has all the conditions for being one of the most prolific and valuable salmon rivers on the coast of the province. The old hatchery at Sydney, C.B., suffered from many disadvantages, being distant from salmon rivers of first-class importance, and not within easy reach of suitable planting grounds. The new hatchery will, on the contrary, have every advantage, viz., an abundant supply of excellent water, proximity of natural spawning grounds, resorted to by the schools of parent fish, and admirable localities within easy reach where the fry can be safely and expeditiously planted. Building operations are being pushed ahead with all speed; but it is doubtful if it will be sufficiently advanced to receive

SESSIONAL PAPER No. 22

semi-hatched eggs from one of the salmon hatcheries on the mainland, though arrangements with this object in view have already been made by me.

New Restigouche Hatchery.

Of the splendid new salmon hatchery at Flatlands on the Restigouche river, N.B. some details were given in my report last year. Its first season was a complete success, though many circumstances made it difficult to carry on the work satisfactorily, the time for the erection of the building being extremely short, so that everything could not be completed, to receive the eggs and allow of there being placed at once in the tanks. Mr. A. Mowat spared no effort to keep the eggs in health and full vitality for fully two months subsequent to November 1, a feat that bears ample testimony to the skill and zeal of that able and expert officer. The new hatchery has been pronounced most admirable by all who have seen it and are qualified to judge, and on account of its location close to the Intercolonial Railway track, its ready access by road and water, and the capital internal and external arrangements, it is a model institution of its kind. As compared with the old Deeside hatchery, remotely situated, difficult of access in winter, and not near either the spawning location (the tide head retaining pond), or the distributing grounds on the Metapedia and important portions of the Restigouche waters, it will be readily seen that the present hatchery offers immense advantages over the old destroyed institution.

Stocking Lord Strathcona's Lakes.

For many years the hatching of landlocked salmon has appeared a desirable project to be taken up and included in the department's fish-culture work. I have on three different occasions authorized with the sanction of the Honorable the Minister, steps to be taken to secure supplies of eggs. In two of these instances it was found impossible to obtain the eggs, chiefly on account of the extremely local character of the fish, the comparatively few ova, which the parent fish produce, and the uncertainty as to the movements of the parent fish when about to deposit their eggs. These difficulties have been experienced by all who have attempted the hatching of land-locked salmon. In October, 1898, the Right Hon. Lord Strathcona expressed to me his desire to obtain some land-locked salmon to be planted in three small lakes or ponds on his Glencoe estate in Scotland. The experiment as proposed possessed special interest and importance, for the Western Highlands of Scotland seemed to provide precisely the conditions for a completely successful effort to establish this Canadian sporting fish in the British Islands. One of the lakes covers nine or ten acres, with a depth of a fathom or more, two other lakes, or ponds, are of smaller area; but through all there is an ample flow of pure water from the mountain streams in the vicinity. With great regret I found that it was impossible to ship a sufficient quantity of eggs to Scotland, though I made efforts to secure some in Quebec, and in several localities in New Brunswick, in which latter province are at least half a dozen lakes said to abound in land-locked salmon. Last fall, however, a more successful attempt was made, and early in April preparations were advanced for shipping a quantity not only of the land-locked variety of *Salmo salar*, but of that famous sporting fish the rainbow trout, which has been so extensively introduced into the Eastern States by sporting clubs and into Nova Scotia waters under the auspices of the Nova Scotia Fish and Game Society, in conjunction with this department. On April 13 last the eggs of the two species named were placed in a cool chamber on board the steamship *Yola* leaving Halifax, N.S., on that date for Liverpool. The most perfect arrangements had been made by Lord Strathcona for the proper reception of the eggs on arrival in England, and for their immediate despatch by rail to the north. They reached Argyllshire safely and without delay and on the trays being examined at the end of the journey some of them were found to be actually hatching out. The young fry were alive and vigorous, and the whole of the eggs were placed in a shallow stream, suitably protected and in a few days all the young fry had emerged. Had there been anything but the most perfect arrangements made by His

Lordship, or had the expert employees, authorized to take charge of the eggs on arrival on the other side of the Atlantic, failed to perfectly carry out their instructions, there can be no question that most of the eggs would have been lost, and the scheme would have totally failed. It was a matter of extreme satisfaction to Lord Strathcona that everything was so successfully carried out, and in a letter to me, dated May 16 His Lordship generously expresses his thanks, for the steps taken to carry out his wishes and introduce into these Western Scottish waters two such valuable and important Canadian fish as the land-locked salmon and the rainbow trout. Some authorities declare the latter to be a land-locked variety of that fine sporting species, and most excellent table fish, *Salmo gairdneri*, the Pacific steelhead. In order to thoroughly establish the two species mentioned in the waters on Lord Strathcona's estate at Glencoe, a further shipment is most desirable, and if an adequate supply of land-locked salmon eggs can be obtained this season, arrangements are contemplated for repeating the plan carried out this year at Lord Strathcona's suggestion.

Breeding of Black Bass.

But while the introduction of valued kinds of fish into new waters is most desirable, there is also included in the science of fish-culture, the propagation, in their natural waters, of fish which cannot be treated by the usual methods of artificial propagation, either from some peculiarity in the eggs themselves, or their deposition and incubation.

I have in previous reports referred to the eggs of black bass, maskinongé and other species as most unfavourable for incubation by the process which is so satisfactory and successful in the case of salmon, whitefish, trout, and other eggs of salmonoid fishes. The black bass is a most important fish. Its game qualities could hardly be surpassed, its comestible qualities place it in the front rank of table fishes, and it is always in demand in the fish markets. The parent black bass have very peculiar breeding habits and place their eggs in a nest which they guard most jealously until the young hatch out. These fish, like the sturgeon and some other species, refuse to yield their spawn, and the most feasible plan is to impound them in inclosures or ponds, allow the parent fish to naturally deposit their spawn and fertilize it, and either transfer the fertilized spawn to a hatchery, and incubate them artificially or allow them to hatch out in the pond, where deposited—keeping them under proper watch and care during the period of incubation, so that no enemies or unfavourable circumstances may interfere with the successful development of the fry.

During the present season the department has secured a suitable pond in the vicinity of the Bay of Quinte, where a large quantity of parent bass have for several years built their nests and spawned. The pond has been properly inclosed and protected, and has been reported to be teeming with small bass. Thirty or forty of these fry were submitted to me for expert examination, and for their age they certainly afforded evidence not only of abundant food in the inclosure, but of very rapid and satisfactory growth. The specimens were most healthy, and the experiment of rearing black bass, near Belleville, is likely to be a distinct success, and might justify other attempts of the same character. The experiment is at too early a stage to express any very decided views upon it; but it is precisely the method which I have for some years advocated, and of which I published full details in the report of this department three years ago (see my special report No. III. pp. 17 and 18, rep. of Dep. M. and F., 1897).

QUANTITIES OF FRY DISTRIBUTED.

The quantities of fry of the kinds hatched in the department's operations and annually distributed, of necessity, varies from year to year. In unfavourable years the amount of ova collected will fall below the average, and the statistics of fish-culture will thus show a decline, but this year, in spite of many obstacles, and a shortage in some hatcheries, the total quantity of fry distributed is so far in excess of the usual annual quantity that it has only once before been exceeded, viz., in the phenomenal year 1895. Indeed, apart from 1895, it has only twice been approached by the totals of any other year, viz: 1893 and 1894, when over 250,000,000 fry were planted from the government's

SESSIONAL PAPER No. 22

hatcheries. This year the enormous total of 265,941,000 represents the entire output from the twelve hatcheries in operation.

The following table shows the numbers planted of various species propagated :—

Salmon (<i>Salmo salar</i>)	5,965,000
Sockeye (Pacific) Salmon (<i>Oncorhynchus nerka</i>)	6,200,000
Salmon-trout (<i>Salvelinus namaycush</i>)	4,446,000
Lake-whitefish (<i>Coregonus clupeiformis</i>)	129,330,000
Lobsters (<i>Homarus americanus</i>)	120,000,000
	265,941,000

The foregoing figures are exclusive, of course, of the 12,000 rainbow-trout eggs (*Salmo irideus*) and of the 10,000 land-locked salmon eggs (*Salmo salar sebago*) which were sent to Lord Strathcona.

For facility of reference the further table below specifies the name and location of each hatchery, also the quantities of young fish and of eggs in an advanced condition supplied by each establishment respectively, and the species of fry or the kind of eggs so distributed during the season.

No.	Name of Hatchery.	Number of Fry distributed.	Number of Eggs sent to other Hatcheries.	Number of Eggs received from other Hatcheries.	Species.
1	Bedford, N. S.	915,000	22,000	87,000	Atlantic salmon.
	"	55,000			Land-locked salmon and rainbow trout.
	"	3,000,000		3,000,000	Lake whitefish.
2	Bay View, N. S.	120,000,000			Lobsters.
3	Sydney, N. S.	Not operated.			
4	Dunk river, P. E. I.	" "			
5	St. John river, N. B.	905,000			Atlantic salmon.
	" "	212,000		250,000	Great lake trout.
	" "	2,840,000		3,000,000	Lake whitefish.
6	Miramichi, N. B.	1,620,000			Atlantic salmon.
7	Restigouche, N. B.	1,125,000			" "
8	Gaspe, P. Q.	Not operated.			
9	Tadoussac, P. Q.	1,400,000	200,000		" "
10	Magog, P. Q.	2,950,000		3,000,000	Lake whitefish.
	"	149,000		150,000	Great lake trout.
11	Newcastle, Ont.	2,950,000		3,000,000	Lake whitefish.
	" "	2,225,000	2,650,000		Great lake trout.
12	Sandwich, Ont.	84,000,000	13,600,000		Lake whitefish.
13	Ottawa, Ont.	1,590,000		2,000,000	" "
	" "	1,860,000		2,250,000	Great lake trout.
14	Fraser river, B. C.	6,200,000	500,000		Sockeye salmon.
15	Selkirk, Man.	32,000,000			Lake whitefish.
	Totals	265,996,000	16,972,000	16,737,000	

FISH

STATEMENT showing the Places where, and the Years in which, the several Fish Establishment, annually, since they

	YEAR.	ONTARIO.			QUEBEC.			
		Newcastle.	Sandwich.	Ottawa.	Magog.	Tadoussac.	Gaspé.	Ristigouche.
		Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.
1	1868-73.	1,070,000						
2	1874....	351,000						100,000
3	1875....	650,000				60,000	110,000	600,000
4	1876....	700,000	8,000,000			150,000	50,000	300,000
5	1877....	1,300,000	8,000,000			1,180,000	1,051,000	600,000
6	1878....	2,605,000	20,000,000			707,000	650,000	1,015,000
7	1879....	2,602,700	12,000,000			1,250,000	1,597,000	1,470,000
8	1880....	1,923,000	13,500,000			1,155,000	730,000	1,500,000
9	1881....	3,300,000	16,000,000		200,000	334,000	500,000	740,000
10	1882....	4,841,000	44,000,000		975,000	660,000	530,000	1,400,000
11	1883....	6,053,000	72,000,000		250,000	995,000	520,000	300,000
12	1884....	8,800,000	37,000,000		100,000	985,000	859,000	940,000
13	1885....	5,700,000	68,000,000		300,000	720,000	290,000	660,000
14	1886....	6,451,000	57,000,000		1,400,000	1,627,000	576,000	1,380,000
15	1887....	5,130,000	56,500,000		675,000	900,000	630,000	1,500,000
16	1888....	8,070,000	56,000,000		3,475,000	850,000	800,000	1,720,000
17	1889....	5,846,500	21,000,000		2,800,000	1,600,000	450,000	1,280,000
18	1890....	7,736,000	52,000,000	5,732,000	2,875,000	1,700,000	806,000	2,396,000
19	1891....	7,807,500	75,000,000	7,043,000	3,050,000	1,300,000	1,000,000	1,750,000
20	1892....	4,823,500	44,500,000	4,909,000	2,400,000	624,000	965,000	1,240,000
21	1893....	9,835,000	68,000,000	6,208,000	3,600,000	2,060,000	910,000	883,000
22	1894....	6,000,000	47,000,000	4,480,000	2,035,000	1,975,000	850,000	1,080,000
23	1895....	6,000,000	73,000,000	3,210,000	3,350,000	2,060,000	675,000	2,885,000
24	1896....	5,200,000	61,000,000	3,950,000	3,400,000	2,500,000	300,000	1,250,000
25	1897....	4,200,000	72,000,000	4,100,000	4,500,000	3,272,000	1,100,000	2,100,000
26	1898....	4,325,000	71,000,000	3,020,000	3,100,000	2,200,000		1,135,000
27	1899....	4,050,000	73,000,000	3,700,000	3,098,000	2,125,000		2,025,000
28	1900....	5,175,000	90,000,000	3,450,000	3,099,000	1,400,000		1,125,000
	Totals..	130,550,200	1,215,500,000	49,803,000	45,042,000	34,389,000	15,949,000	33,374,000

CULTURE

Hatcheries have been erected ; also the number of Fry distributed from each were built, including the Year 1900.

NEW BRUNSWICK.		NOVA SCOTIA.			P. E. ISLAND.	BRITISH COLUMBIA	MANITOBA	Totals.	
Miramichi.	St. John. River.	Bedford.	Sydney.	Lobster Hatchery, Bay View.	Dunk River.	Fraser River.	Selkirk.		
Fry.	Fry.	Fry	Fry.	Fry.	Fry.	Fry.	Fry.	Fry.	
								1,070,000	1
60,000								510,000	2
150,000								1,570,000	3
60,000		395,000						9,655,000	4
320,000		1,000,000						13,451,000	5
665,000		1,400,000						2,042,000	6
1,025,000		1,740,000						21,684,700	7
805,000	170,600	730,000			500,000			21,013,000	8
770,000	50,000	680,000			375,000			22,949,000	9
640,000	588,000	850,000	315,000		1,060,000			55,859,000	10
925,000	72,600	800,000	659,000		1,210,000			83,784,600	11
795,000	811,000	1,000,000	853,000		1,000,000			53,143,000	12
900,000	155,000	670,000	772,000		1,100,000	1,800,000		81,067,000	13
945,000	2,181,000	950,000	1,179,000		400,000	2,625,000		76,724,000	14
900,000	2,479,000	4,230,000	1,415,000		500,000	4,414,000		79,273,000	15
1,290,000	4,142,000	4,390,000	1,559,000			5,807,000		88,109,000	16
850,000	3,570,000	3,850,000	2,034,000			4,419,000		47,700,000	17
1,022,000	3,492,000	3,860,000	1,953,000			6,640,000		90,213,000	18
1,503,000	3,165,000	2,550,000	1,000,000	7,000,000		3,603,800		115,772,300	19
1,310,000	2,378,000	2,620,000	690,000	63,500,000		6,000,000		135,959,500	20
975,000	3,299,000	3,180,000		153,600,00		5,764,000		258,314,000	21
1,010,000	4,096,000	3,805,000	288,000	160,000,000		7,800,000	14,500,000	254,919,000	22
1,200,000	4,060,000	3,815,000	195,000	168,203,000		6,390,000	19,000,000	294,040,000	23
1,430,000	4,068,000	4,225,000	243,500	100,000,000		10,393,000	4,500,000	202,459,500	24
1,558,000	4,155,000	5,450,000	496,000	90,000,000		5,928,000		198,859,000	25
1,557,000	3,290,000	3,000,000		85,000,000		5,850,000	9,000,000	192,477,000	26
1,605,000	3,980,000	4,025,000		100,000,000		4,742,000	20,000,000	222,350,000	27
1,620,000	3,957,000	3,970,000		120,000,000		6,200,000	32,000,000	265,996,000	28
25,890,000	54,159,200	63,195,000	13,652,500	1,047,300,000	6,145,000	88,375,800	99,000,000	2,916,164,200	

It is not an unreasonable supposition that the fisheries of the Dominion benefit substantially by the planting of the enormous quantities of the fry of valuable food-fishes stated in the foregoing tables. The hatching of cod, haddock, mackerel, and other marine fishes, has not hitherto been attempted. The eggs of these fishes, indeed, are less favourable for incubation and treatment by artificial methods than the salmonoid family, and the vast number of eggs produced by each spawner (a single cod shedding 9 or 10 millions of eggs each season), the extremely delicate and fragile character of the ova and the young fry—indeed the futility of handling the fry, are the reasons which have deterred operations in Canada in that direction. If Canadian fish culture succeeds in doing anything to keep up the stock of fish in our salmon rivers, great lakes and streams, it is doing much, and if by introducing western species into eastern waters and *vice versa*, it may do more, it may be left to the unassisted methods of nature to recuperate the illimitable ocean, open to all the fishing fleets of the world, and well nigh impossible to efficiently protect from nefarious and excessively destructive methods of fishing.

I have the honour to be,
Your obedient servant,

EDWARD E. PRINCE,
Commissioner of Fisheries and General Inspector of Fisheries for Canada.

APPENDICES.

1.—FRASER RIVER HATCHERY, BRITISH COLUMBIA.

NEW WESTMINSTER, B.C., December 7, 1900.

PROFESSOR E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to report the operations of the Fraser River hatchery for the season 1899-1900.

The first lot of ova were placed in the troughs at the hatchery on September 28, the last on October 19, the total quantity secured being 7,496,000 eggs.

Of this lot 500,000 eggs were shipped to New Zealand; 720,000 eggs or 9.6 per cent of the total failed to hatch, and were picked out. The young fry after being hatched out did not at first thrive very well, possibly from some of the troughs being overcrowded and a further loss of 76,000 fry before distribution, is recorded, bringing up the percentage of loss in the hatchery to 10.6 per cent. Two hundred thousand of the fry were put into the creek of the hatchery to relieve the troughs and the balance of 6,000,000 were liberated in the Harrison River, the last lot being taken up on March 1, 1900. The first fish appeared on December 5, a great many of the first lot being out on December 10. The ova were all hatched out on January 19, the period of incubation varying from 73 to 90 days.

The average morning temperature of the water from September 28, to January 19, was 42.3°.

In the season before (1898-9) the last lot of eggs were placed in the hatchery on November 8, 1898, and the ova were all hatched out March 8, 1899, giving 120 days as the period of incubation, the average morning temperature of the water being 38.1°.

A leak in the dam during the summer let the water out, and in addition to having it patched up as well as possible, I had the flume extended across the dam to the creek above, so that in case of a similar failure of the dam during the winter, we might still be able to secure a supply of water for the troughs. There were very few fish this year in Morris creek, and we only secured two small shipments (about 310,000) of sockeye ova. Finding that there was no chance of stocking the hatchery this season with sockeyes, I had different streams where cohoes are usually plentiful, examined, with the view of substituting this variety, but regret to say without success. While a few fish could have been obtained at different points, the run was so poor everywhere that at no one point could we obtain sufficient to justify the expense, even had time permitted of the attempt to secure a sufficient supply of ova, by utilizing several different streams. Under these circumstances it may be necessary to close the hatchery for this season. The new hatchery near Tappan Siding, Shuswap lake, was begun in July and is now nearing completion. The building is 169 feet in length by 35 feet in width, and it has 2,375 lineal feet of hatching troughs besides reception tanks. The water will be supplied from Granite creek by a pipe line 1,400 feet in length.

Some provision will require to be made for accommodating the officer in charge and his assistants while the hatchery is in operation, and the streams from which the ova is to be obtained will require to be carefully examined and the necessary arrangements made to secure the ova before the salmon reach the lake next summer.

I have the honour to remain, sir,

Your obedient servant,

C. B. SWORD, *Officer in Charge.*

2.—BEDFORD HATCHERY, NOVA SCOTIA.

BEDFORD, N.S., December 4, 1900.

PROF. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my annual report of the work done at the Bedford hatchery for the year 1900. Eggs were procured and laid down in the troughs from the following named places :—

- November, 1899, Carleton, N.B., 1,000,000 salmon ova.
- March, 1900, Sandwich, Ont., 3,000,000 whitefish.
- April, 1900, Caledonia, New York, 72,000 rainbow trout.
- April, 1900, Quebec, 15,000 land-locked salmon.

Of this lot 12,000 rainbow trout eggs and 10,000 land-locked salmon eggs were shipped to the Right Hon. Lord Strathcona, Glencoe, Argyllshire, Scotland, which I had the pleasure to hear arrived there in splendid condition.

The remainder of the eggs were hatched, with a very small percentage of loss, and distributed as follows :

Whitefish.

McPherson's lake, Pictou Co., N.S.	500,000
Goshen lake, Antigonish County, N.S.	500,000
Brazil lake, Yarmouth County, N.S.	500,000
Paradise lake, Annapolis County, N.S.	500,000
Lake Au Law, Inverness County, N.S.	800,000
Sandy lake, Halifax County, N.S.	200,000
Total	3,000,000

Rainbow Trout.

Micmac Game and Fishing Club, Halifax	36,000
McFadden's lake, Albert County, N.B.	10,000
Prichard's lake, Pictou County, N.S.	7,000
Cold Brook Stream, King's County, N.S.	7,000
Total	50,000

Land-Locked Salmon.

Silver lake, Halifax County, N.S.	5,000
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Sea Salmon.

Nine Mile river, Halifax County, N.S.	75,000
Pennant river, Halifax County, N.S.	50,000
Annapolis river, Annapolis County, N.S.	75,000
Avon river, Hants County, N.S.	50,000
East river, Pictou County, N.S.	50,000
Carribou river, Pictou County, N.S.	50,000

SESSIONAL PAPER No. 22

Cornwallis river, Kings County, N.S.....	75,000
Gaspereaux river, King's County, N.S.....	75,000
Lake New Horton, Albert County, N.B.....	50,000
Lochaber lake, Antigonish County, N.S.....	50,000
Morrell river, Prince Edward Island.....	75,000
Naufrage river, Prince Edward Island.....	75,000
Wheatley river, Paine Edward Island.....	75,000
Rawdon river, Halifax County, N.S.....	50,000
Sackville river, Halifax County, N.S.....	40,000
Total.....	915,000

It often occurs that application for fry are not received until too late to supply them, consequently applicants are disappointed. All applications should be made to the department not later than May 1, as the fry are usually all planted by the middle of June.

I might mention the fact that during the months of August, September and October large quantities of small salmon were seen at the head of Bedford Basin, and ascended the river in October, when the waters were high enough for them to get up stream.

During the past four years I have been planting a few thousand fry in Sackville river, say from 10,000 to 20,000 each year, which accounts for their showing up so well in the basin now.

About four years ago some 80,000 salmon fry were planted in the head-waters of the Tantramar river, Westmorland County, N.B., and last year (it is reported) large numbers of salmon were taken in the shad nets off Westcock and near the mouth of the river in which the fry were planted. I have been told by some of the aged inhabitants of Sackville, N.B., that salmon had not been caught in these localities, for forty years previous, and attributed this catch to the supply furnished from this hatchery.

I am satisfied that good results will follow when the fry is planted in suitable streams.

Last month I received from the Carleton pond 500,000 salmon eggs. There is a large space in the trough where rainbow trout or other eggs can be handled. As there is a large demand for rainbow trout, I think that it would be advisable to procure more eggs this season and stock some of our lakes where our native trout have been exterminated.

During the past summer the roof of the hatchery has been shingled, a new cupola built, and the necessary repairs made. One new drain was constructed and two old ones reopened. One chimney was found to be broken at the roof and in very dangerous condition, it was rebuilt from the roof and the other two chimneys repaired. The outside of the building received two coats of paint, and it is now in good order. The interior is in good working order, except the supply tank which is old and tender, and two floor troughs are also somewhat rotten these may require renewing next year.

In all other respects the hatchery is now in better condition than it has been for many years.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

3.—ST. JOHN RIVER HATCHERY, NEW BRUNSWICK.

GRAND FALLS, N.B., November, 27, 1900.

PROF. EDWARD E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I respectfully beg to submit herewith my annual report of the transactions and the work done and performed at the Rapide des Femmes, St. John river fish hatchery, during the present year under my supervision.

In the month of November last, as has already been reported, there were laid down in the hatching troughs in this establishment about 1,100,000 sea salmon eggs, and in the month of March of this year I received a further supply of ova, consisting of 250,000 salmon trout eggs from Newcastle, and 3,000,000 whitefish eggs from Sandwich, Ontario; these I met by instruction at McAdam Junction in charge of Mr. William Parker, and by myself conveyed the shipment to the hatchery. The eggs were all in good condition, and continued to do fairly well during the winter and we succeeded in hatching out a good percentage, as can be seen by the tabulated statement of the quantity of young fry distributed last spring and summer.

Whitefish Fry distribution, April 25.

Harvey Lake, York county.....	320,000
Lake George, York county.....	320,000
Lake Yohoe, York county.....	320,000
Oromocto lake, York county	320,000
Mohanneous river, Charlotte county.....	320,000
Baldhead lake, York county.....	320,000
Forest lake, York county.....	320,000
Forest lake, York county.....	240,000
Baulieu pond, Victoria county.....	240,000
Pond at the hatchery, Victoria county.....	120,000
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	2,840,000

Salmon-trout Fry, June 14.

Harvey lake, York county.....	32,000
Oromocto lake, York county.....	32,000
Mohanneous lake, Charlotte county.....	32,000
Tomlinson lake, Victoria county.....	24,000
Lake George, York county	32,000
Beaulieu Pond, Victoria county	20,000
Long lake, Victoria county	20,000
Pond at the hatchery.....	20,000
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	212,000

SESSIONAL PAPER No. 22

Sea Salmon fry, June 25.

Skiff lake, York county.....	150,000
St. Croix river, Charlotte county.....	150,000
Newcastle, Miramichi.....	45,000
Tobique river, Victoria county.....	180,000
St. John river, N.B.....	380,000
Total.....	905,000

Recapitulation.

Whitefish fry distributed.....	2,840,000
Salmon-trout fry distribution.....	212,000
Sea-salmon fry.....	905,000
Total number distributed.....	3,957,000

The work of distributing was completed July 16, 1900. Then our attention was turned to renovating the house, putting it in as proper shape as possible for the next season's operation, such as cleaning, washing, varnishing the trays, troughs, and tanks, &c., and renewing the paint on various parts of the interior of the hatching room.

Therefore I consider the house, now, in good condition for the winter operation. Apart from the foregoing, the only other addition made to the building was three new ladders, one a ground ladder, and two roof ladders, one at each flue or chimney.

Stripping the Salmon, collecting Ova, &c.

On the 25th day of last October we left the Grand Falls for Carleton, St. John West, having shipped the egg cases and trays a week in advance. The next morning I met Mr. Alexander Mowat and Mr. Ogden, and as usual Mr. Joseph O'Brien had all the arrangements made ready for us to begin work. After I ascertained that the fish were sufficiently ripe we commenced to take the spawn, Mr. Mowat and myself. In two days we filled five cases for Mr. Ogden. He then left for home, and on November the first I sent four cases of eggs in charge of Frank McCluskey to our own hatchery. On the sixth I left for home with three more cases containing in all about 1,000,000 of eggs, there was still a number of fish in the pond to be stripped when I left. Mr. O'Brien informed me that he had received a letter from you giving the balance of the eggs to Mr. Mowat for his hatchery on the Restigouche—consequently, as my cases had been a long time packed, I did not think that it would be prudent to keep them any longer from the hatchery. How many more fish remained in the pond when I left, I do not know. There was according to my tally 377 fish manipulated during the time that I was present, 241 females and 136 males. The fish were all in good condition, free from any disease whatever.

The eggs in the hatchery are apparently doing well with every prospect of a good yield next spring. We have a fine supply of good pure water in the house at present, with every prospect of a continuous abundance during the winter. The only repairs necessary to the hatchery is a new platform and steps at the hatchery door, which is needed at present, all of the foregoing is most respectfully submitted.

I am sir,

Your obedient servant,

CHAS. McCLUSKEY,
Officer in Charge.

4.—MIRAMICHI HATCHERY, NEW BRUNSWICK.

SOUTH Esk, N.B., November 22, 1900.

Professor EDWD. E. PRINCE,
Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to submit the following report on the operations at this fish hatchery for the past year.

As stated in my last annual report, there were 1,715,000 salmon ova collected and placed in this hatchery during the autumn of 1899. The approximate loss from the time of gathering the ova until distribution was completed, amounted to 95,000, leaving a balance of 1,620,000 fry, which were distributed over the following streams, viz :—

Name of River.	Number of Fry.
North-west Miramichi river and tributaries.....	525,000
Main South-west Miramichi river.....	200,000
Little South-west Miramichi river and tributaries.....	500,000
Sevogle river.....	200,000
Renous river.....	70,000
Barnaby river.....	50,000
Stewart's brook.....	10,000
Warrens pond Kensington, P. E. I.....	25,000
Bells lake, Cape Traverse, P. E. I.....	40,000
Total.....	1,620,000

As several applications were received by me for fry for Barnaby river, I thought it advisable to add that river to the list. This is a very good stream to plant fry in, but owing to a lumber boom at its mouth, very few full grown salmon can enter it until late in the season, after the lumber has been removed. The transfer of ova to Prince Edward Island, to fill applications of Messrs. Bell and Leslie, was very successfully performed, as in each shipment the fry were landed at their destination in excellent condition. The only objection to this transfer was that, in my opinion the planting grounds were not the most suitable that might have been selected by the different applicants, but no doubt this matter can be better arranged if any fry are carried from here to the island during the coming season's distribution, or at any future time.

In addition to the number of fry already mentioned, there was about 40,000 shipped from Grand Falls hatchery, to fill an application made by R. H. Armstrong, Esq., of New-Castle. This gentleman applied for 250,000 ova from that hatchery, but the matter having been allowed to stand until it was too late to ship the ova, this number of fry was sent instead. About one-third of the shipment were lost in transit owing to the very warm weather at the time, and an unavoidable delay at St. John. They were placed in the hatchery here as soon as received and the dead fry removed. There was a balance of 25,000 saved from the lot and they were planted on the head-waters of the North-west Miramichi in the waters of the club of which Mr. Armstrong is manager. On the whole, the past season's distribution of fry was very successful and highly satisfactory.

SESSIONAL PAPER No. 22

Repairs.

During the summer season, about \$200 was expended in keeping this hatchery and the buildings and appliances in connection therewith in good running order. I may say that all the out-buildings are now in first-class condition and will not require any repairs for quite a number of years. A few necessary repairs were put on the interior of the hatching room, but I did not think it advisable to expend any great amount on that part of the building, as it will be necessary in the near future, to replace the present hatching troughs and tanks with a new set. The supply pipes are a source of great annoyance and outlay, as they have outlived their usefulness. Quite an improvement could be made by replacing the four old wooden pipes that now convey the water from the supply dam to the hatchery, by one good-sized iron pipe. I would recommend that the outside of the building be painted next year, as it has a very shabby appearance at present. It will also be necessary to have a new scow built for towing purposes, as the one in use up to the present is completely worn out.

Collection of Ova.

After having put the nets and appliances necessary for capturing parent salmon in good condition, the work of procuring this season's supply was commenced on September 17. The fish were obtained in the same manner as in former years, viz., by means of seining the pools in the non tidal waters of the North-west Miramichi, and by a trap-net on the Little South-west Miramichi. The total number of fish obtained from September 17 until the work was completed on December 24 was 373, of this number, 121 were taken from the trap-net on the Little South-west, and the remaining 252 were obtained from the seining operation on the North-west Miramichi. A much larger number could have been obtained, in the same length of time, and for the same expenditure, if it were not for the high water that prevailed in all the streams from October 12, until the close of the season. This freshet made it very difficult to operate the nets and also allowed nearly all the fish to pass up beyond our reach. As the fish were beginning to spawn, and as a sufficient supply for this hatchery had been obtained, the nets were removed on October 24, and collection of ova at the retaining pond was commenced. It was found that the fish consisted of 230 females and 143 males. The work of stripping these fish continued until November 10. The total number of ova obtained therefrom amounted to 1,620,000, showing an average yield from each fish of over 7,000. These ova were all placed in hatching troughs here, and are presenting a very promising appearance at the present date.

General Remarks.

During the summer months, I had considerable correspondence with several gentlemen regarding the matter of procuring them a supply of sea trout ova, but as they allowed the season to get too far advanced before finally deciding what arrangements they could make to receive the ova, the matter was allowed to drop. I am of the opinion that it would be advisable for the department to allow me to obtain a number of parent trout next season, in order that the various applications for trout fry might be filled. It would not materially add to the running expense of this hatchery to collect and hatch about 100,000 trout ova, as the parent fish can be obtained very conveniently and at a moderate cost. The applications for both salmon and trout fry are increasing every year. In regard to this matter of applying for fry, quite a number of parties made application during the past season when it was too late, not understanding the matter. In every instance where it was thought that the waters, in which it was proposed to plant the young fry was suitable, the usual blank application forms were supplied the persons desiring the young fry. Great interest is manifested in this artificial work by the American sportsmen who are visiting the Miramichi in greater numbers every year, as well as by the managers of the different fishing clubs, who are generally resident citizens. Quite a number of these gentlemen have given assurance that they

64 VICTORIA, A. 1901

are perfectly satisfied that the work is materially benefiting their streams, and are highly pleased with the manner in which the Government fosters the fisheries of our rivers. Good catches have been reported by the anglers on all the streams, from which I could obtain information. The value of our river and bay fisheries for commercial purposes must also not be overlooked. Generally speaking, the netting and shipping interests have had another successful season, and with very few exceptions, the fishermen and dealers agree that they are being greatly benefited by the judicious planting of fry from this hatchery every season, and the opinion is frequently expressed that the output of fry should be doubled, if possible. And while on this point, I may say that I would strongly advocate replacing the present hatchery with one having nearly twice the capacity, and more modernly fitted up, in order that the work be extended, and a much larger output of fry be made annually, although good work is being done at present, it is worthy of the attention and consideration of the department, that it is being carried on under a great many disadvantages, owing to the limited space and the want of improvements and the way in which the hatchery is generally arranged.

In concluding this report, it may be added, that every effort is made to not only perform the routine work in a thorough and careful manner, in order that the best results may be obtained from the operation of this hatchery, but also every opportunity is taken advantage of to acquire a practical knowledge and closer acquaintance with the habits of the fish frequenting our rivers and lakes and also with the general study of fish-culture in its different branches.

I am, sir,
Your obedient servant,

ISAAC SHEASGREEN.

5.—RESTIGOUCHE HATCHERY.

RESTIGOUCHE HATCHERY, November 24, 1900.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—It is with great pleasure that I submit my annual report upon the operations of the Restigouche hatchery during the past year of 1900.

As stated in my report for 1899 about 1,500,000 eggs were collected at the Tide Head pond, operations ending November 1. But as the work of building the new hatchery at Flat Lands did not commence before November 6, we were obliged to retain the eggs in the packing cases for two months, it being the 1st January before the new hatchery was in a condition for the reception of the eggs. These eggs then by skillful manipulation were kept two months before being laid down in the hatching troughs in running water. Notwithstanding this 75 or 80 per cent of the eggs were hatched and brought forth fine healthy fry. This I believe is unprecedented, as about three weeks were conceded to be the time limit that fish eggs could be kept out of water without injury.

Distribution of Fry.

The fry were distributed both by water and by rail in the following localities:—

Restigouche river from Hatchery to Kedgwick.....	600,000
Metapedia river conveyed by rail.....	525,000
Total.....	1,125,000

SESSIONAL PAPER No. 22

These were all liberated in the best of condition. I regret to report it was found impossible to plant the usual number in the Upsalquitch, owing to the river being completely jammed with logs at the falls. We were unable to navigate through them with the present cumbersome apparatus, which I trust will give place another year to the improved tow-barge, which I have already recommended for this important work.

The Retaining Pond.

This pond at Tide Head was reconstructed and the Government nets placed in fishing order as soon as the freshet would admit, but a great deal of hardship and trouble were experienced in perfecting this work, and I regret to report that the catch of fish was not as large as I would have liked or anticipated, but the elements over which we have no control must rule. The unusual late spring and great snow freshet sending thousands upon thousands of valuable saw-logs out to sea, prevented getting the nets set before 15th and 20th of June, just two weeks later than usual. Even at this date there was so much debris running, which tore the nets and kept them from fishing the first week. Consequently only 281 fish were captured in both nets. These were placed in the divisions on the 18th of October, when the work of collecting the eggs was proceeded with, and continued until the 3rd of November. Some 1,400,000 eggs were obtained and deposited in the new hatchery in perfect condition. The parent fish never looked better and were again returned to sea after being stripped. No loss occurred.

Carleton Pond.

In obedience to instructions I left for St. John on October 23, to render assistance there. Over 500 fish were manipulated, two-thirds proving to be females. The yield was great, and after the usual supplies were sent forward to Rapide des Femmes and Bedford hatcheries, a surplus of over a half million were transferred to the Restigouche and laid down in fine condition, making a good total of about two millions of eggs in this hatchery at the present time. This will permit of supplies of semi-hatched eggs being sent to some of the new hatcheries in the spring, if desired.

I cannot speak too highly of the Carleton pond, it is the most perfect place in the world for the retaining of the parent salmon. The mother fish and eggs are always in perfect condition. I would certainly recommend that the number of parent fish be increased, so that the new hatchery now being built and others can be supplied with these fine fish.

The new Hatchery at Flat Lands.

This institution is now in perfect running order and almost thoroughly equipped. Great praise is given the contractor and others for the fine location and beautiful building. Mr. McAllister, our late member, expresses himself thus: The new hatchery is a credit to Flat Lands, a credit to the contractor, and to the Government. There is a never-failing supply of good water, and the whole equipment is first-class. The upper flat is nicely fitted up for dwelling and now occupied by the caretaker and his family. I am sure it is one of the finest hatcheries in the Dominion, and affords every facility for hatching and rearing large numbers of fry.

The sheet iron tanks which I have already recommended can now be introduced, thus filling up the vacant space left for this purpose. With the introduction of these tanks we will be in a position to hold over and feed 100,000 fry until they are six months old. This, I think to be of great importance and ought to be adopted at once. The cost of feeding will not be very great.

We are also in need of a small retaining pond at the hatchery. This can be made by excavating. Should sides and bottom require cementing, cost would probably reach \$200. I would urge the importance of this pond. Quite a number of the fry could be retained until three and four years old and marked before liberating. The work would

64 VICTORIA, A. 1901

be most interesting and productive of valuable information, regarding the movements, migration and growth of the Atlantic salmon, which we know so little about.

I would suggest the fitting of a fish car, with tanks, etc., similar to those in use in the United States. This scheme would admit of all kinds of adult fish being transferred from one point to another in the Dominion, and many lakes and rivers stocked with parent fish in addition to the fry and parr.

Results of Artificial Planting.

I heard a great deal from many sources and sections of the good results attending the artificial work. In the Sackville river at the head of the Bay of Fundy, where fry have been planted, I heard of immense quantities of immature salmon being taken in the nets this year and last. Also in a lake near Sussex, N.B., which has been stocked with fry, lots of the two and three year old fish have been caught during the past season. Some were sent to me for identification and proved to be three year old salmon. There are many other places I have heard of with equal results. Our own rivers were simply alive with parr and smolt this year. The men at the retaining pond say they saw great schools of these little fish attempting to work their way through the grating inclosing the parent salmon, on their migration to sea.

General Remarks.

Notwithstanding the spring being fifteen days later than usual, the fish struck in very early, the first salmon being caught at Dalhousie on the 8th of May. Many of the nets were not set and very little angling done before the 12th of June, consequently the first big run of fish escaped. Still anglers had fine sport. Four or five rods about 15th June, at Metapedia, brought in thirty-one salmon for that day's catch. Mr. King, lessee of the Kedgwick River, took twelve salmon in one day in June. This was 75 miles above Metapedia. This is sufficient evidence to show that large numbers of fish have been running into the rivers in May.

The guardians just returned from the headwaters of the Kedgwick, report that the river was filled with breeding fish this autumn. The riparian committee have been doing excellent work the last few years by leasing out some of the licensed nets in the estuary. They ought to be encouraged in this good work by both governments, as this combined with the good protection and artificial work, will make the far-famed Restigouche the greatest commercial and sporting river in the world.

All of which is respectfully submitted.

I am, sir, your obedient servant,

ALEXANDER MOWAT,
Fishery Officer.

6.—TADOUSSAC HATCHERY, QUEBEC.

TADOUSSAC, December 7, 1900.

Professor E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In answer to your letter of the 12th ultimo, I have the honour to submit my annual report of the work done at the Tadoussac hatchery for the season 1900. From the 2,000,000 of salmon eggs laid down in the hatchery last fall, 1,800,000

SESSIONAL PAPER No. 22

hatched out and in the month of June, 1,400,000 salmon fry were distributed in the following rivers and lakes :—

Ste. Marguerite river	260,000
Baude river	300,000
Chisholm river ..	300,000
Mowat's lakes ..	300,000
Roberval hatchery	100,000
Murray river	50,000
Ste. Anne river	50,000
Kenogami lake	10,000
Hatchery lake	30,000
	<hr/>
	1,400,000

As reported in time, there was no distribution of salmon fry in the upper Saguenay, on account of a loss of 400,000 fry caused by an accident in the iron tube. The water stopped running down, the iron tube being blocked by something. I sent for a blacksmith with tools to take away the part of the tube holding the key; there we found four (4) big eels, blocking entirely the whole tube at the key. The kind of key placed in the tube by Mr. Wilmot in the building of the hatchery was one used for steam, and being crooked, those four big eels, from 3 to 4 feet long, were jammed in the tube at the key. We had great trouble to clear it. This fall a new key has been put up to the tube, to allow the water to pass full size of the tube, so in future any eels, fish or anything coming down from the Hatchery lake by the tube, will fall in the long 80 feet tank. As usual, the departmental nets were set up in May for the capture of the parent salmon. 520 salmon were kept in the salmon pond in good condition, until ready to spawn in the end of October and beginning of November. Of that number we have collected from the 300 big female salmon, 3,350,000 of eggs. From that number 200,000 carefully packed in green moss and thin cloth, have been sent to the Roberval hatchery in charge of my son, and laid down by himself in the hatchery. The eggs were in splendid condition when he left Roberval. The 3,150,000 laid down in our hatchery filled up well the whole building. Everything in the hatchery is in good working order. The old wood stove being broken, I bought a coal stove in place. The hatchery is now heated by two coal stoves, being more convenient for keeping a regular temperature during the nights. The Mowat's lakes, as usual, have received a good portion of the salmon fry during the distribution. The lakes are always teeming with young salmon going down to the Grand Cove on the St. Lawrence river, about four miles below the Bay of Tadoussac. The salmon fishing has been very good for the net fishermen and for the anglers in the salmon rivers. Splendid catches have been made by the gentlemen of the Ste. Marguerite New York Salmon Club. The head guardian of the Ste. Marguerite river for the New York Club, after his return of inspection of the river, reports that he never saw so many parent salmon on the spawning beds. I have also been told that the River à Mars on the Ha Ha Bay, the property of William Price, Esq., was well stocked with parent salmon. In previous reports I spoke of the necessity of repairing the dam of the salmon pond, being opened at one end by the pulling down of the old hatchery a few years ago. The temporary closing of the pond, as reported before, by a fence of boards and wire nets set up on long pickets, is not quite safe in heavy winds and strong tides. I hope something will be done early next spring to close the dam of the salmon pond. Twenty-five more large cans for the distribution of salmon fry next May are much needed. From the 3,150,000 eggs on the trays in the very best condition, we will have a large distribution of fry next season.

I have the honour to be, sir,
Your obedient servant,

L. N. CATELLIER.

7.—MAGOG HATCHERY, QUEBEC.

MAGOG, November 27, 1900.

Prof. E. E. PRINCE,
Dom. Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit herewith a report of the operations at this hatchery during the year 1900.

On February 21, I received at Magog railway station, from Mr. William Parker, 3,000,000 whitefish eggs from Sandwich, Ontario, and 150,000 salmon-trout eggs from Newcastle, Ontario ; they all arrived in very good condition, and continued to do well during the period of incubation. The hatchery was in good condition, with a plentiful supply of beautiful clear water. The distribution of young fry from the hatchery commenced on May 2 and continued until June 8, being planted in the following lakes:—

Salmon-trout.

Lake Magog, County of Brome and Stanstead	30,000
Lake Fortin, County of Beauce	23,000
Lake Nick, County of Brome	5,000
Lake Massawippi, County of Stanstead	10,000
Trouser Pond, County of Brome	10,000
Brome Lake, County of Brome	10,000
Lake Lyster, County of Stanstead	10,000
Spooner Pond, County of Richmond	10,000
Breaches Lake, County of Wolfe	10,000
Lac La Peche, County of Champlain	15,000
Lac des Iles, County of Champlain	10,000
Lake Gendron, County of Sherbrooke	6,000
Total	149,000

Whitefish.

Lake Memphremagog, County Brome and Stanstead ...	1,225,000
Lake Megantic, County Megantic	200,000
Lake Massawippi, County Stanstead	475,000
Key Pond, County Sherbrooke	300,000
Oxford Pond, County Brome and Sherbrooke ...	500,000
Brome Lake, County Brome	200,000
Lac Le Peche, County Champlain	50,000
Breaches Lake, County Wolfe	50,000
Lake Lyster, County Stanstead	50,000
Total	2,950,000

It is most gratifying to me, and no doubt most pleasing to you, to know that the above large number of tender young fry were planted in the several waters herein mentioned without any appreciable loss, particularly when we consider that a great part of them had to be conveyed over three hundred miles and part of the journey the worst kind of a wagon road, you will very easily conceive the amount of care and attention

SESSIONAL PAPER No. 22

it requires to be in a position to report to you such gratifying results of the year's operations.

Repairs.

As mentioned in my last year's report that the penstock in the hatchery was leaking badly, I found on taking it out that it was completely rotted out; I had it replaced at a cost of ten dollars. The floor is also badly rotted and as it is very old it will be necessary to have it replaced by a new one in another year. I would strongly recommend the purchase of three ladders, one ground ladder and two for the roof, one to each chimney. This is necessary in case of fire.

I am, sir, your obedient servant,

ALEX. FINLAYSON,
Officer in charge.

8.—NEWCASTLE HATCHERY, ONTARIO.

NEWCASTLE, December 10, 1900.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries.

SIR,—I have the honour to submit a report of the fish cultural operations carried on at this hatchery during the past year.

The following schedule will show you the points of distribution, also the numbers and kinds of fry distributed and placed in each locality last spring.

Whitefish.

Lake Ontario, Hamilton.....	300,000
“ Toronto.....	300,000
“ Cobourg.....	300,000
“ Consecon.....	300,000
Bay Quinté, Belleville.....	300,000
“ Picton.....	300,000
Lake Simcoe, Barrie.....	300,000
Lake Couchiching, Orillia.....	300,000
Georgian Bay, Meaford.....	300,000
“ Collingwood.....	250,000
Total distribution whitefish.....	2,950,000

Salmon-trout.

Lake Ontario, Toronto.....	150,000
“ Hamilton.....	150,000
“ Kingston.....	125,000
“ Cobourg.....	125,000
“ Picton.....	125,000
“ Consecon.....	125,000
“ Newcastle.....	100,000
“ Bowmanville.....	100,000

64 VICTORIA, A. 1901

Bay Quinté, Belleville	125,000
Georgian Bay, Collingwood	125,000
“ Meaford	125,000
“ Wiarton	200,000
Lake Huron, Southampton	125,000
“ Simcoe, Barrie	125,000
“ Couchiching, Orillia	125,000
Lakes Haliburton, per applications	125,000
“ on Bay Quinté Ry. “	150,000
<hr/>	
Total distribution salmon-trout	2,225,000
“ whitefish	2,950,000
Eggs shipped to Ottawa	2,250,000
Eyed eggs shipped to Magog	150,000
“ “ Grand Falls, N.B.	250,000
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Total distribution from Newcastle	7,825,000

I beg to inform you that the fry were all in first-class condition and deposited in the different waters.

According to your instruction on October 1, I proceeded to Wiarton with two assistants, to procure the usual supply of salmon-trout ova for Newcastle, Ottawa and other hatcheries in the Lower Provinces. We arrived at Wiarton in the evening of the 1st October.

We had some difficulty in starting our operations, as on pulling our Pile Driver into the open water, we found on examination that she was totally unsafe and in such a decayed condition, as to necessitate pulling her into the dry dock to undergo some repairs, which necessitated about a week's delay.

We succeeded in getting our nets set about the 29th October, and on the 6th November secured about 96 trays of eggs in good condition.

We experienced some very rough and trying weather all through November, and encountered great difficulties in operating our nets and doing our spawning. The continued north-east and east winds made it almost impossible to do our work with safety, and made it a matter of much anxiety to me that whether the weather would permit us securing a sufficient supply of ova to stock the several hatcheries in the Dominion. However, I am happy to say at present time of writing, we secured some 4,500,000, out of which quantity Mr. John Walker, of the Ottawa hatchery, received 1,500,000, which leaves a balance in this hatchery of 3,000,000 in good condition and to all appearances doing well.

Our plant in Wiarton is in good condition, all and except our spile driver, which is now totally unfit for another year's operations, which I will have to ask from \$125 to \$150 to replace the same to continue our operations there. The hatchery is in first-class condition and to all appearance will need nothing extraordinary for some years to come.

We had, while in Wiarton, the pleasure of a visit from Professor A. B. Macallum of Toronto University, to secure a supply of ova from the female fish and the milt from the male for scientific purposes. I have the pleasure to inform you that he went home well pleased with his visit, the arrangements for which had been made by your instructions, although the weather was very stormy the day we went to raise our nets.

I have the honour to be, sir,
Your obedient servant,

WM. ARMSTRONG,
Officer in charge.

9.—OTTAWA HATCHERY, ONTARIO.

OTTAWA, November 27, 1900.

Prof. E. E. PRINCE,
Commissioner of Fisheries, &c.

SIR,—I have the honour to submit my annual report of the operations carried on in the Ottawa fish hatchery during the year 1900.

On November 8, 1899, were received from Mr. W. Armstrong, of the Newcastle hatchery, about 2,250,000 salmon trout eggs which had been collected at Wiarton, Ont. The eggs were deposited in the hatching trough in good condition. Also in the month of February, 1900, I received from Mr. W. Parker, of the Sandwich hatchery, about 2,000,000 whitefish eggs. The eggs were in good condition when received.

The fry hatched out strong and healthy in the month of April and first week of May. The work of distributing the fry was done by Mr. Cunningham and Mr. A. M. Ross of the Fisheries Department. I am pleased to say that the work was done in a very satisfactory manner and very successfully.

The fry having been deposited in the following named waters :—

Salmon-Trout.

Clayton Lake	30,000
Mount Tremblant Lake	60,000
Charleston Lake	180,000
Sharbot Lake	60,000
Eagle Lake	50,000
Rock Lake	150,000
Victoria Lake	140,000
Villa Mon Repos Lake	50,000
Three Rivers Lake	70,000
Rideau Lake	90,000
Lac Noir	60,000
Lac des Sables	100,000
Commandant Lake	100,000
No. 7 Lake (Joliette)	60,000
Christie Lake	30,000
Bass Lake	60,000
St. Gabriel Lake (Labelle)	40,000
Little Whitefish Lake	60,000
Blue Sea Lake	100,000
Millers Lake	40,000
Wensley Lake	40,000
Clear Lake	60,000
Meach's Lake	100,000
Whelan's Lake	30,000
Shipped to lakes in P. E. Island	100,000
	<hr/>
	1,860,000

Whitefish.

Sharbot Lake.....	300,000
Eagle Lake.....	150,000
Mississippi Lake.....	150,000
Black Lake	300,000
Bass Lake.....	180,000
Rideau Lake.....	240,000
Clayton Lake	90,000
Mount Tremblant.....	180,000
	<hr/>
	1,590,000

On November 20, I received about 1,500,000 salmon-trout eggs, which are now in the hatching troughs for this season's operations.
The hatchery is in good repair and condition for the work this year.

I remain, sir,
Your humble servant,

JOHN WALKER,
In charge of Ottawa Hatchery.

10.—SELKIRK HATCHERY. MANITOBA.

SELKIRK, November 30, 1900.

To Prof. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I have the honour to again report on the operations and results at the hatchery at this place.

I find now, after three years experience in this institution, that the season has very much to do with the success of our efforts to hatch out whitefish eggs.

In the fall of 1898 winter set in, and the river was frozen over the very day the ova was placed in the jars, and our efforts that season were crowned with highly satisfactory results.

Last season and this have been quite the reverse, high temperature and open water, with its consequent admixture of mud, together with most unsuitable jars, combined to make it almost impossible to have a satisfactory showing.

After the date of my last report the winter continued open and mild, and we experienced endless trouble with fungus right up to the end of the hatching season, and the ultimate results were less than we anticipated, or had every reason to expect.

The number of applications for fry were in excess of last year, or any former year, and on receiving directions from your office the output of the hatchery was distributed as follows :—

Applicant.	Lake.	Quantity.
Inspector E. W. Miller, N.W.T.....	Qu'Appelle Lake.....	5,000,000
Overseer Fitzgerald, Grenfell.....	Crooked Lake	5,000,000
Capt Smith, Ninette.....	Pelican Lake	3,500,000
Geo. Lawrence, M.P.P.....	Killarney.....	3,500,000
.....	Lake Winnipeg.....	15,000,000
		<hr/>
Total quantity of fry distributed.....		32,000,000

SESSIONAL PAPER No. 22

I went myself with the fry to the Qu'Appelle lakes, and on arrival at Qu'Appelle station, where I was met by Inspector Miller, we took waggons to Fort Qu'Appelle, where the fry was planted after a ride of about 375 miles, the last 20 being in a waggon in a hot sun.

I cannot say that I was satisfied with the condition of the fry at the time of planting, and would suggest that these waters be stocked from some other source.

Mr. Page, of the hatchery staff, who had charge of and superintended the planting about 25 miles out from Grenfel, in Crooked Lake, is of the same opinion, and is convinced that successful plantings cannot be made at such a distance, and with the same means of transportation.

Notwithstanding that it took two full days from the time of leaving the hatchery to reach Ninette, the fry were healthy and vigorous, and a very satisfactory planting was effected, in Pelican Lake, about a quarter of a mile from the station. Thanks to Capt. Smith and Mr. Yellowlees, and others of Ninette, who rendered assistance.

Mr. Page also took the stock to Lake Killarney, reaching there in one day. He reports favourably on the condition of the fry, and expects to hear of good results in the course of three years.

All the fry tanks were then filled, and with the assistance of the tug *Viking*, and crew, Messrs. Page and Ward—both of the hatchery staff—planted them as far out in Lake Winnipeg as the ice would admit. The remainder, not being a sufficient quantity to warrant any expense in planting, was allowed to go in Red River.

On receipt of your instructions by wire on the night of the 12th of October, I at once notified Mr. T. K. McKenzie, of your acceptance of his offer to provide a supply of ova for the hatchery, and on the night of the 15th, I started with his outfit, on board the tug *Highlander*, to superintend operations at the mouth of Black River.

On landing at Black River we found quite a few whitefish in shallow water, but were mostly males. By the 20th we found fishing good and spawn running freely, and in seven days we had sufficient ova to fill all the trays we had.

On my arrival in Selkirk on the night of Sunday, the 28th, I found the hatchery in perfect readiness to receive the eggs, and by the night of the 29th had them all placed in the jars, and every jar in the place full.

Owing to the continued warm and windy weather the river water was unfit for use on account of mud and high temperature, and the supply from the artesian well was insufficient to run the battery, so we were compelled to use about half of each.

For a time it looked as though we should suffer a total loss from fungus, but I put on some extra help for a short time, and now that the weather has become colder, and the river frozen over, prospects are much brighter, and we have every reason to hope for average results.

The improvements made in the hatchery, authorized last September, have put the institution in good working order, and everything would be in very satisfactory shape if we only had the proper hatching jars such as I understand the department is arranging to supply, and the suction pipe extended farther into the river, so as to avoid silting every year.

The outside painting and part of the inside, was not done this fall, as we were pressed for time, and it was thought that it could be better done in the spring.

I beg to again draw attention to the pressing necessity of a fence around the grounds. A good portion of the old fence which you saw when visiting the institution last fall, is now down to the ground, leaving the whole front of the premises open and unprotected, and presenting a most dilapidated looking spectacle. I would be much pleased to receive instructions at an early date to have the fence renewed, so the posts could be gotten out this winter, and the fence built in the spring as soon as the frost is out.

I would also suggest that tenders be invited this winter, for a supply of wood for the next season, believing that quite a saving could be effected in price. Inviting tenders in the spring of the year leaves the competition confined to the very few who take out a stock during the winter for speculation. You will no doubt remember that last season we had but one offer.

64 VICTORIA, A. 1901

The close of the hatching season for whitefish being the best spawning time for sturgeon, the staff at the hatchery as well as myself would be much pleased if you would permit some experiments next spring in the direction of hatching out some sturgeon. The sturgeon can be taken in the river here, and the period of incubation being so short, the cost, outside the men's wages, would be very nominal. I therefore hope you may be pleased to authorize something in this line next spring.

The register shows the usual number of visitors, and Mr. Page as well as the rest of the staff, are always very courteous in answering the numerous questions asked regarding the process of taking and hatching the eggs.

The existence of the hatchery here is creating an interest, and disseminating a knowledge of fish and fish-culture in this locality, which did not exist prior to the establishment of the institution at this place.

There are two or three rivers emptying into Lake Winnipeg, which have natural falls of water, where hatching could be carried on at a very small cost compared with a location such as the one here where steam has to be employed. I have in former reports recommended the establishing of other hatcheries in this province, and I beg to again urge that the matter receive the attention of your Department.

I have the honour to be, sir,
Your obedient servant,

F. W. COLCLEUGH,
Officer in charge.

11.—BAY VIEW LOBSTER HATCHERY.

BEDFORD, N.S., December 4, 1900.

Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—I beg to submit my report of the work done at the Bay View Lobster Hatchery for the season of 1900.

On May 15 last, I arrived at Bay View, and at once commenced to put all appliances in order for the season's operations. On the 17th, I engaged the steamer *May Queen* had her employed three days in distributing boxes among the factories for the collection of ova.

The pump was started on May 24 and 21,000,000 eggs were brought to the hatchery on that date by *May Queen* and placed in the jars for incubation.

From that time up to June 20 ova were collected from fifteen factories between Saddle Island, Caribou, and around Pictou Island, and 120,000,000 of fry were hatched and distributed in Pictou Bay.

The young lobster first appeared in the incubators on June 13, which is earlier than any year previously.

The distribution of fry was also earlier, having commenced on the 21st and ended on the 30th June.

Incubation was more rapid this season than ever before since the opening of this hatchery, which probably can be accounted for by the lack of gales and storms, which permitted a higher temperature of water.

This has been a very successful season for lobster fishing and packing, and much of the increase of fish is attributed to this hatchery, by both packers and fishermen.

As previously reported some temporary repairs were made to this wharf which has been badly damaged by ice during the previous winter.

SESSIONAL PAPER No. 22

It is quite probable that during the coming winter the top of the outer block will be carried off by ice, which will seriously interfere with next season's operations, unless some means can be devised to extend the suction pipe to the channel independent of the outer pier.

I have made arrangements for the necessary repairs to the steam boiler, which are but trifling.

The fresh water reservoir previously reported as almost decayed out, was made to hold water, last spring, by cementing the inside, but a new one will probably be required next season.

I am, sir,

Your obedient servant,

ALFRED OGDEN.

12.—SANDWICH HATCHERY.

SANDWICH, December 17, 1900.

To Prof. E. E. PRINCE,
Dominion Commissioner of Fisheries,
Ottawa.

SIR,—In accordance with the rules of the department and in compliance with your instructions, I take pleasure in submitting my annual report of the work connected with the fish hatchery here under my supervision.

According to last year's report this hatchery contained 100,000,000 whitefish eggs, from which were turned out 85,000,000 young fry and semi-hatched eggs, which were disposed of as follows :—

Eyed eggs.

Newcastle, Ont.	3,000,000
Ottawa, Ont.	2,000,000
Magog, Que.	3,000,000
Bedford, N. S.	3,000,000
St. John, N. B.	3,000,000
Total	14,000,000

Young fry.

Point Edward, Lake Huron	4,000,000
Belle Isle, Detroit River	3,000,000
Fighting Island, Detroit River	4,000,000
In Bay below Fighting Island	4,000,000
Stony Island, Detroit River	4,000,000
Bois Blanc Island, Detroit River	6,000,000
In Lake below Bois Blanc Island	6,000,000
Pigeon Bay, Lake Erie	6,000,000
Bar Point, Lake Erie	4,000,000
Colchester, Lake Erie	3,000,000
Kingsville, Lake Erie	1,000,000
Leamington, Lake Erie	1,000,000
Rondeau, Lake Erie	1,000,000

64 VICTORIA, A. 1901

Port Stanley, Lake Erie	1,000,000
Hamilton, Lake Ontario	1,000,000
Niagara, Lake Ontario.....	1,000,000
Toronto, Lake Ontario.....	1,000,000
In River at hatchery	20,000,000
Grand total.....	85,000,000

All the above fry were placed in the water at the above named points in good condition.

This fall we have secured and laid in the hatchery 110,000,000 whitefish eggs, which are in excellent condition.

The total catch of fish this autumn is accounted for as follows :—

Liberated	9,995
Sold.....	1,950
Salted.....	100
Lost	75
Used.....	60
Hotel Dieu (Hospital).....	20
	12,200

The catch of fish.

Upon the authority of some of the old fishermen, the up river run of the fish, owing to the warm weather, was with one exception later by two weeks than it has been any season for the last forty-five years.

Although the fish were unusually late in coming into the river it was one of the best seasons for collecting eggs for the past 17 years, as the fish, when taken, were almost ready to spawn, and as a consequence we did not have to hold them as long in the racks as other years before we got the eggs.

As will be observed the above figures show that we have not caught as large a quantity of fish as last year. In this respect I wish to state that we did not require as many for the reason that we got the eggs so much quicker and better than in former years. When we 'reeled up' we were catching from 30 to 50 at a haul, which shows that the whitefish continue to gradually increase in the waters here.

Repairs.

In conclusion, I wish to also report that I have, with your approval, laid a new waste pipe from the hatchery to the river. I have had the interior and exterior of the hatchery repainted and the foundation under the boilers, pumps, racks and tanks renewed.

I remain,

Your obedient servant,

WILLIAM PARKER,
Officer in charge.

SESSIONAL PAPER No. 22

ANNEX A.

REPORT ON OYSTER CULTURE BY THE DEPARTMENT'S EXPERT
FOR THE SEASON OF 1900.

OTTAWA, December 20, 1900.

To the Honourable

Sir LOUIS H. DAVIES, K.C.M.G.,
Minister of Marine and Fisheries.

SIR,—I have the honour to submit my report on oyster culture for the season of 1900.

Just previous to the opening of navigation I left Ottawa and proceeded to New Glasgow, N.S., where I inspected the steam launch *Davies*, and found that she could be used by me in Murray River, P.E.I., for the purpose of planting oysters there, and as soon as she was ready for sea, took charge of her until the close of the lobster season, when I handed her over to Commander Spain, at Pictou, N.S.

MURRAY HARBOUR, P.E.I.

In last year's report it will be seen that a portion of my time was devoted in preparing a bed in Murray Harbour and partially planting the same with young oysters, but owing to the lateness of the season was unable to finish it, and on my arrival this spring I made a careful examination of the bed, and found the oysters alive and in a healthy condition, and from appearance have every reason to believe the area selected is a suitable one, the ground was very clean, there is a good current running over the area on both flood and ebb tides, it is also well sheltered from the weather, as it is apparently landlocked, the most wind that affects it is from the westward, which sweeps down Murray River and does not amount to much.

After arrangements had been made to secure the remaining quantity of oysters from Richmond Bay for stocking the beds, they were caught and forwarded in small consignments to Georgetown by train, and thence to Murray Harbour by steamer, thus ensuring quick dispatch. The oysters were taken from their native beds one day, and transplanted by myself on the beds in Murray River on the following day. One hundred and twelve barrels were secured and planted this spring. These all arrived in good condition and gave me splendid satisfaction. I have not had an opportunity of visiting the area since, as my time has been taken up elsewhere.

Since the above beds have been planted a warden has been appointed to guard against poaching on the reserved area.

TRACADIE, N. S.

After completing the reserved area in Murray Harbour I visited Tracadie and examined the reserved area in the harbour, and after a fair trial of the grounds, came to the conclusion that the oysters are not doing as well as was expected. I find a large percentage of deaths since my last visit. The oysters appear to have matured and are gradually dying after becoming grown. The shells have grown large and very thick, and the oysters that are alive appear to be in good condition. On my previous visit I found a small percentage of deaths, but nothing of very serious moment considering the time and distance of transit, etc. I cannot account for this death rate, as both arms are fed with the water through the same channel, and are identically the same as far as

the soil is concerned, both being sheltered from the sea, as both arms are landlocked. The bottom is clean where I have planted the oysters, and the water clear.

I also visited the North-West Arms which is connected to the East Arm by a narrow strip of water, and found the whole area where oysters exist covered with last year's spat, and everything is looking very healthy. The large oysters are scarce. I took up about two barrels of small oysters from the West Arm and laid them down on a certain portion of the reserve to see if they will live and grow. I am of the opinion that it would be advisable to close down the North-west Arm from public fishing for a period of two years, to let the young ones mature, as by so doing it would bring the quantity of oysters up again. Of late years these oyster beds have been nearly exhausted, owing to the fishermen catching up nearly all the stock that exists there, it would be to their future advantage to give the beds a rest for a certain period. Only four fishermen fished there last year and their total catch merely amounted to between twenty and thirty barrels.

Having finished the above grounds I returned to Pictou with the steam launch and handed her over to Commander Spain who immediately placed her on the lobster protection service. I then proceeded to Charlottetown and secured the services of a small tug, the *Nelson*, and after placing my oyster gear on board sailed for Shediac, N.B., to inspect the oyster areas in that locality.

SHEDIAC, N. B.

On my arrival here I examined the whole area and found the beds in a healthy condition, the oysters having grown to a large size, are full of fish, and several young ones of various sizes are to be found growing on the beds.

The eel grass which covers the whole of the bay is a great detriment to the floating spat finding a clean suitable bottom to settle upon, and I find on examination of several of the smaller uncultivated beds where the eel grass has grown over them that large oysters are to be found, but very few small ones; if this grass were to be removed it would give a large area of clean soil for the spat to settle and thrive upon. By past experience with these grounds I find that when the grass or weed has been thoroughly removed it does not grow again and the shells on the clean beds will catch the spat. Some of these old beds are completely covered over with eel grass, and unless it is removed the oysters will eventually die and the beds become covered over with weed and sediment.

A few hauls of the dredge on the large bed were as follows: Southern side, 86 oysters, 19 brood; 42 oysters, 24 brood; 71 oysters, 16 brood. Eastern side, 24 oysters, 10 brood; 19 oysters, 10 brood; 16 oysters, 15 brood. On the northern and middle part of bed, 67 oysters, 19 brood; 83 oysters, 31 brood; 76 oysters, 48 brood, and 67 oysters, 37 brood.

On No. 2, or Hannington bed, eastern part, 61 oysters, 48 brood; 40 oysters, 22 brood; 19 oysters, 16 brood. On the western side 47 oysters, 24 brood; 18 oysters, 10 brood, and 47 oysters, 58 brood.

On bed No. 3, southern part, 49 oysters, 52 brood; 160 oysters, 81 brood. Northern side, 65 oysters, 60 brood, and 62 oysters, 42 brood.

On my arrival here the water was very clear and the bottom of the beds could be distinctly seen from the deck of the steamer, and several fresh marks were noticeable where poaching had been carried on, as the mark of the rakes or tongs were clearly seen. I found two different pieces of tongs which had been broken while being used on the beds. Stakes were also found which were placed by poachers to mark the beds, so that they could go without loss of time and begin their illegal fishing. I was informed that several persons were caught fishing on these beds by the fishery officers and the guilty ones were fined.

Before finishing my work here I proceeded to Richmond Bay, P.E.I., to inspect the beds there, and to obtain some oysters for the Paris Exposition, particulars of which will be found in this report.

SESSIONAL PAPER No. 22

Later on my time was also taken up in removing the weed and eel grass from some of the smaller beds on the bay, this has the effect of making a larger oyster growing area and will enhance the value of the beds in this locality.

While I was here instructions were received by Inspector Chapman from the Department, informing him of their intention to open these beds for oyster fishing to licensed fishermen in the locality for a period of three weeks, when my time was devoted to inspecting the fleet of fishermen, seeing as far as possible that no small oysters were landed from the beds, and obtaining the amount of oysters caught daily.

As near as could be ascertained the approximate number of oysters taken during the above period amounted to between eleven and twelve hundred barrels. There were one hundred and seventy-five oyster licenses issued, and it was difficult to obtain from every individual the exact quantity actually caught each day, but the above figures are about as fair and true as could be ascertained. The men were engaged six days during the first week, four days the second week, and four days the last week, bad weather stopping the fishing on the other days.

After working as long as it was possible as far as the weather was concerned, I brought my work to a close for the season by removing the beacons from the areas I had been engaged on, and returned to Charlottetown, and after taking the oyster gear out of steamer handed her over to her owners.

RICHMOND BAY, P.E.I.

Having examined the oyster areas in this bay, they appeared to be in a flourishing condition, and fishermen remarked that oysters have not been so plentiful for years, both as regards marketable oysters and small ones.

Many of the beds, where illegal dredging has been carried on and very few oysters originally existed on the tops of the beds, are now covered with small oysters too young for market. The dredging has had the effect of cleaning the shells and cultch so that it was in a fair way to receive the spat during the spawning season.

I would not advise opening the bay up for dredging, as so many boats would commence operations if permitted to do so, that it would soon ruin the industry, and what little dredging is done (if any) does no harm; there are some men who are strongly opposed to it, while others favour it in moderation.

In Grand River oysters appear to be scarce, although there is a good supply of very small ones. The scarcity is, I believe, owing to overfishing, and I would respectfully suggest that this area be closed for the space of one season as an experiment.

In fact it would be a great advantage if several areas in this bay and elsewhere were closed alternately each season, but it would be a difficult matter to lay off areas and keep persons from fishing upon them, although I do think this area might be closed from the bridge down to the ferry wharf for the space of one season.

Sample.—The sample of oysters caught around Bideford River, Narrows and other adjoining rivers appear to have improved both in quantity and size at the opening of this season, and the fishermen were satisfied with their catch; they are careful in throwing out the small ones, which has the effect of improving the sample by separating the young oysters from the full grown ones. This gives the bed a better chance to develop all round. This rule should be insisted upon all over the bay, and the fishermen should land only marketable oysters which would bring them a better price. I believe the majority of the packers do all they can to avoid taking the small ones, but it is the fishermen themselves who are so careless, although I must say there is a decided improvement in the cull with many of the fishermen, no doubt due to the extra vigilance on the part of the officers on shore.

In other parts of the bay the oysters appear as if they were caught too soon, and if they were left for another year they would grow, fatten and make very fine oysters. Owing to the number of fishermen who annually fish here, the beds are almost drained dry as it were, but the rapidity of the growth of the oyster is remarkable, or these beds would never last as they do.

Size Limit.—There is one thing which should receive the Department's serious attention, and that is the size limit. Clause No. 6 of the oyster regulations reads as follows:—'No person shall fish for, catch, kill, buy, sell, or have in possession, any round oysters of a less size than two inches in diameter of shell, nor any long oysters measuring less than three inches of outer shell.'

This two-inch measurement was never intended for Prince Edward Island. I specially pointed out when framing these regulations that Caraquet oysters were very small, and a diameter of two inches was given as a minimum size, although it was never clearly stated in the regulations or license, and if this two-inch size were abolished altogether, it would be a great advantage to the beds, fishermen, packers and consumers, and greatly enhance the value of the whole industry.

A three-inch oyster is really too small for market, but when it comes down to two inches it is out of character altogether. Several complaints have been made of the small size limit that is at present in force, and until a change is made the fishermen will not throw over an oyster which is really of a legal size, although utterly unfit for market.

ALTERATION OF SEASON.

Several of the fishermen and packers approve of oyster fishing to commence on the 1st October instead of the present date (16th September).

By starting later in the season the shell of the oyster becomes much harder and is not so liable to break in transit, which causes a loss to both shipper and receiver, and if sent any considerable distance oysters are more liable to spoil in September than if they were shipped in October.

If the season were shortened till the 1st of October, I do not think there would be any material difference in the quantity of oysters caught and less oysters would be spoilt, as they would be in better condition and keep longer.

There are also a lot of young men who will fish for a short time after the season opens, causing a glut in the markets which brings the price down, and after the weather becomes colder and wild will stop fishing after taking the cream of the oysters, leaving the hardest of the work to the more persevering and regular oyster fishermen.

Several of these men are also engaged in agricultural pursuits, and if the season did not open until October their crops would be garnered, but all are anxious to commence oyster fishing at the opening, as it is a means of bringing ready money on the sale of their catch, and often their farms are neglected and crops spoiled.

I am of opinion, however, that the present season gives general satisfaction, and before making any alteration in the dates I think it would be advisable to send a circular to the men who are engaged in packing and sending off large quantities of oysters, as they are the ones it affects the most and the risk of the sale is on their shoulders.

OYSTERS SENT TO PARIS EXHIBITION.

Having received instructions to select a few choice samples of oysters for exhibition purposes, I obtained and forwarded five barrels, and two half barrels. One barrel and a half was taken from the reserved area in Shediac, N.B. These oysters were a large sample, as the beds had not been fished upon for years, of a uniform size, and very full of fish. The other four and a half barrels were secured from Richmond Bay, Indian Island, and Bideford River, P.E.I. These oysters were of a smaller sample, round and deep, cup shaped, well-fished and of an even size. They were all carefully selected, packed, and shipped to Paris, the result being that the Island oysters gained the highest award. This is very gratifying and speaks well for our oysters, as there was much to contend with, considering the time of year they were shipped (September 24), the distance they were sent, the rough handling while in transit, and the time they were out of water while on the passage would naturally cause them to lose some of their flavour, while oysters could be sent from French and English beds within a few hours of their being caught and arrive in as fresh condition as they were when taken from the beds.

SESSIONAL PAPER No. 22

STEAMBOAT REQUIRED.

During the time I have been engaged on the work of oyster culture with the department, there has always been a difficulty in chartering a suitable steamer for my work, some have given satisfaction, while others have proved themselves to the contrary. I respectfully wish to call the department's attention to the necessity of either having a serviceable boat built for the work, or to purchase, if one could be found suitable. It would be in the interest of the department to own a boat, as my time is engaged on the water from the opening to the close of navigation, and two years' hire would more than pay for one being built, which could be arranged with every accommodation to suit my work. As the area to be looked after covers New Brunswick, Nova Scotia and Prince Edward Island, it is desirable to have a serviceable boat suitable to make a passage in ordinary weather, with a roomy deck, also accommodation for the crew, as there are times when one has to live on board, while making a passage or is stormbound. The chief items are a boat of very good speed, power, and shallow draught of water not exceeding four feet, as some of the beds are lying in very shoal water and the channels in these landlocked areas are very intricate. A boat of this description would not cost much to build and would be very economical to run and keep up.

Other subjects relating to oyster culture have been published in my previous reports, and further reference to them here does not appear to be necessary.

I have the honour to be, sir,
Your obedient servant,

ERNEST KEMP,
Oyster Expert.

APPENDIX No. 12.

REPORT ON THE FISHERIES PROTECTION SERVICE OF CANADA BY
COMMANDER O. G. V. SPAIN, FOR THE SEASON OF 1900.

OTTAWA, December 10, 1900.

To the Honourable

SIR LOUIS H. DAVIES, K.C.M.G.,

Minister of Marine and Fisheries, &c.; &c.

SIR,—I have the honour to report on the work of the Fisheries Protection and Fisheries Intelligence Bureau services, under my charge for the past season as follows:—

The vessels comprising the fleet are shown in the following table:—

Acadia, Commander O. G. V. Spain;
La Canadienne, Commander W. Wakeham;
Curlew, Captain Pratt;
Petrel, Captain Dunn;
Osprey, Captain Knowlton;
Kingfisher, Captain Kent;
Brant, Captain McKinnon;
Stanley, Captain Brown;
Constance, Captain May;
Quadra, Captain Walbran.

This last named vessel was employed, when occasion required, as a fisheries protection cruiser, on the Pacific coast.

This season, on account of the extra work in reference to patrolling, necessitated by the stringent enforcement of the lobster regulations in different localities, (there are now six different seasons for legally catching lobsters on various parts of the coast), the two vessels *Stanley* and *Brant* were placed at my disposal for a short period, during the very busy time.

The patrols of the different cruisers were generally as follows:—

The *Acadia* patrolling the coasts of Nova Scotia, Cape Breton, Prince Edward Island and part of New Brunswick and Quebec, and as usual, generally superintending the fleet. During the latter part of the season an accident happened to one of the boilers, which necessitated her paying off and going out of commission rather earlier than usual.

La Canadienne.—This vessel works independently of the rest of the fleet, and was under the charge of Commander Wakeham. Her usual patrol was on the Labrador and Quebec coasts. Commander Wakeham's report will be forwarded with that of the fishery inspector.

Curlew.—This vessel is employed in the Bay of Fundy and on the Nova Scotia coast, and has done excellent work in many ways.

Petrel.—Again employed in Lake Erie. She has also been very serviceable on occasions, in assisting the lighthouse and buoy service.

Osprey.—This schooner's station was altered for this season and she patrolled the Prince Edward Island and Cape Breton coasts, with headquarters at Souris and Georgetown.

Kingfisher.—Stationed on the Nova Scotia and Cape Breton coasts, with headquarters at Canso. Both these schooners have done good work.

Brant.—This is the new vessel, built in Prince Edward Island, chiefly for the lighthouse supply service. I consider she is well up to her work. She has been principally engaged in putting a stop to illegal lobster fishing in Northumberland Strait and on the Prince Edward Island coast.

SESSIONAL PAPER No. 22

Stanley.—Patrolling the Cape Breton coast, principally for a short period in the fall of the year. This vessel is rather too large and expensive for the class of work I have to deal with.

Constance.—This vessel has been entirely under the control of the Customs Department, and I understand has most ably carried out her instructions in putting a stop to smuggling.

A report of the details of the work of each captain will be found herewith, together with the more particular movements of the ship under his command.

In addition to the above named cruisers, three tugs were again employed this year, as follows :—

Davies.—This vessel is owned by the department, and was under the charge of first officer Graham, with a crew from the *Acadia* and *Osprey*. She patrolled Northumberland Strait, and after that was over she was lent to the Customs to look after their business in Halifax Harbour during the winter.

Florence C.—A chartered tug, under command of first officer Demers, and a crew from the *Curlew*. She patrolled the south-east coast of Nova Scotia, and was under the immediate directions of inspector Hockin.

Sea Bird.—Was hired for two months in the late fall, and was attached as a tender to the *Kingfisher*. Captain Kent reports that this vessel, with slightly more accommodation, would be an excellent boat for the work.

I found that fishermen obeyed the regulations for the protection of the lobsters much better than in previous years. This may be, and in my opinion is, due to the very strict patrol that was kept up all round the coasts.

My thanks are due to the captains, officers and men of the service, who have performed their arduous duties to my satisfaction.

The season, taking it all round, has not been an eventful one, very few United States mackerel seiners being in North Bay, the captains of the cruisers understanding their work, and the masters of fishing vessels fairly well understanding and obeying the rules, as to exactly what rights they have in our ports.

The following are the instructions still in force, to the officer commanding the Fisheries Protection Service :—

INSTRUCTIONS TO COMMANDERS OF GOVERNMENT VESSELS ENGAGED IN THE PROTECTION OF THE INSHORE FISHERIES OF CANADA.

DEPARTMENT OF FISHERIES,
OTTAWA, March 16, 1886.

SIR,—In the performance of the special and important services to which you have been appointed you will be guided by the following confidential instructions.

For convenience of reference, these have been divided under the different headings, of *Powers, Jurisdiction, Duties, and General Directions*.

POWERS.

The powers with which you are invested, are derived from, and to be exercised in accordance with the following statutes, among others :—‘The Fisheries Act’ (31 Vic., cap. 60, of Canada); ‘An Act respecting Fishing by Foreign Vessels’ (31 Vic., cap. 61, of Canada), and the subsequent statute entitled :—An Act to amend the Act respecting Fishing by Foreign Vessels, made and passed the 12th May, 1870 (33 Vic., cap. 15, of Canada); also, ‘An Act to further amend the said Act, (34 Vic., cap. 23, of Canada).’

‘Chapter 94 of the Revised Statutes (third series) of Nova Scotia’ (of the ‘Coast and Deep Sea Fisheries’), amended by the Act entitled : ‘An Act to amend cap. 94 of the Revised Statutes of Nova Scotia’ (29 Vic., cap. 35).

An Act passed by the legislature of New Brunswick entitled: 'An Act relating to the Coast Fisheries, and for the prevention of Illicit Trade' (16 Vict., cap. 69).

Also an Act passed by the legislature of Prince Edward Island (6 Vic., cap. 14) entitled: 'An Act relating to the Fisheries, and for the prevention of Illicit Trade in Prince Edward Island, and the coasts and harbours thereof.

Also from such regulations as have been passed or may be passed by the Governor General in Council, or from instructions from the Department of Fisheries, under the 'Fisheries Act,' hereinbefore cited.

As fishery officer you have full authority to compel the observance of the requirements of the *Fisheries Acts* and regulations by foreign fishing vessels and fishermen in those parts of the coasts of Canada to which, by the Convention of 1818, they are admitted to privileges of taking or drying and curing fish concurrent with those enjoyed by British fishing vessels and fishermen.

You will receive instructions from the Customs Department authorizing you to act as an officer of the Customs, and in that capacity you are to see that the revenue laws and regulations are duly observed.

JURISDICTION.

Your jurisdiction with respect to any action you may take against foreign fishing vessels and citizens engaged in fishing is to be exercised only within the limits of 'three marine miles' of any of 'the coasts, bays, creeks or harbours,' of Canada.

With regard to the Magdalen Islands, although the liberty to land and to dry and cure fish there is not expressly given by the terms of the convention to United States fishermen, it is not at present intended to exclude them from these islands.

DUTIES.

It will be your duty to protect the inshore fisheries of Canada in accordance with the conditions laid down by the Convention of the October 20, 1818, the first article of which provides:—

'Whereas differences have arisen respecting the liberty claimed by the United States, for the inhabitants thereof to take, dry and cure fish, on certain coasts, bays, harbours and creeks, of His Britannic Majesty's dominions in America, it is agreed between the high contracting parties, that the inhabitants of the said United States shall have, for ever, in common with the subjects of His Britannic Majesty, the liberty to take fish of every kind on that part of the southern coast of Newfoundland, which extends from Cape Ray to the Rameau Islands, on the western and northern coast of Newfoundland, from the said Cape Ray to the Quirpon Islands, on the shores of the Magdalen Islands, and also on the coasts, bays, harbours and creeks from Mount Joli, on the southern coast of Labrador, to and through the Straits of Belle Isle, and thence northwardly indefinitely along the coast without prejudice, however, to any of the exclusive rights of the Hudson's Bay Company; and that the American fishermen shall also have liberty, for ever, to dry and cure fish in any of the unsettled bays, harbours and creeks, of the southern part of the coast of Newfoundland, here above described, and of the coast of Labrador; but so soon as the same, or any portion thereof, shall be settled, it shall not be lawful for the said fishermen to dry or cure fish at such portions so settled, without previous agreement for such purpose with the inhabitants, proprietors or possessors of the ground.'

'And the United States hereby renounce for ever any liberty heretofore enjoyed or claimed by the inhabitants thereof, to take, dry, or cure fish on or within three marine miles of any of the coast, bays, creeks or harbours of His Britannic Majesty's dominions in America, not included within the above mentioned limits; provided, however, that the American fishermen shall be admitted to enter such bays or harbours, for the purpose of shelter and repairing of damages therein, of purchasing wood and of obtaining water, and for no other purpose whatever. But they shall be under such restrictions as may be necessary to prevent

SESSIONAL PAPER No. 22

their taking, drying or curing fish therein, or in any other manner whatever abusing the privileges hereby reserved to them.'

By this you will observe, United States fishermen are secured the liberty of taking fish on the southern coasts of Labrador, and around the Magdalen Islands, and of drying and curing fish along certain of the southern shores of Labrador, where this coast is unsettled, or if settled, after previous agreement with the settlers or owners of the ground.

In all other parts the exclusion of foreign vessels and boats is absolute, so far as fishing is concerned, and is to be enforced within the limits laid down by the Convention of 1818, they being allowed to enter bays and harbours for four purposes only, viz.,—*for shelter, the repairing of damages, the purchasing of wood, and to obtain water.*

You are to compel, if necessary, the maintenance of peace and good order by foreign fishermen pursuing their calling and enjoying concurrent privileges of fishing or curing fish with British fishermen, in those parts to which they are admitted by the Treaty of 1818.

You are to see that they obey the laws of the country, that they do not molest British fishermen in the pursuit of their calling, and that they observe the regulations of the fishery laws in every respect.

You are to prevent foreign fishing vessels and boats which enter bays and harbours for the four legal purposes above mentioned, from taking advantage thereof, to take, dry or cure fish therein, to purchase bait, ice, or supplies, or to tranship cargoes, or from transacting any business in connection with their fishing operations.

It is not desired that you should put a narrow construction on the term 'unsettled.' Places containing a few isolated houses might not, in some instances, be susceptible of being considered as 'settled' within the meaning and purpose of the convention. Something would, however, depend upon the facts of the situation and circumstances of the settlement. Private and proprietary rights form an element in the consideration of this point. *The generally conciliatory spirit in which it is desirable that you should carry out these instructions, and the wish of Her Majesty's Government that the rights of exclusion should not be strained,* must influence you in making as fair and liberal an application of the terms as shall consist with the just claims of all parties.

Should interference with the pursuits of British fishermen or the property of Canadians appear to be inseparable from the exercise of such indulgence, you will withhold it and insist upon entire exclusion.

United States fishermen should be made aware that, in addition to being obliged, in common with those subjects of Her Majesty with whom they exercise concurrent privileges of fishing in colonial waters, to obey the laws of the country, and particularly such Acts and regulations as exist to ensure the peaceable and profitable enjoyment of the fisheries by all persons entitled thereto, they are peculiarly bound to preserve peace and order in the *quasi* settled places to which, by the liberal disposition of Canadian authorities, they may be admitted.

Wheresoever foreigners may fish in Canadian waters, you will compel them to observe the fishery laws. Particular attention should be directed to the injury which results from cleaning fish on board their vessels while afloat, and the throwing overboard of offals, thus fouling the fishing, feeding and breeding grounds. 'The Fisheries Act' (section 14) provides a heavy penalty for this offence.

Take occasion to inquire into and report upon any modes of fishing, or any practices adopted by foreign fishermen, which appear to be injurious to the fisheries.

You will accost every foreign fishing vessel within the limits described, and if that vessel should be either fishing, preparing to fish, or should obviously have been fishing within the prohibited limits, you will, by virtue of the authority conferred upon you by your Commission, and under the provisions of the Acts above recited, seize at once (resort to force in doing so, being only justifiable after every other effort has failed) any vessel detected in violating the law, and send her or take her into port for condemnation.

Copies of the Acts of Parliament subjecting to seizure and forfeiture any foreign ship, vessel or boat which should be either fishing, preparing to fish, or should obviously

have been fishing within the prohibited limits, and providing for carrying out the seizure and forfeiture are furnished herewith for your information and distribution.

Should you have the occasion to compel any foreign fishing vessels or fishermen to conform to the requirements of the 'Fisheries Act and Regulations,' as regards the modes and incidents of fishing, at those places to which they are admitted under the Convention of 1818, particularly in relation to ballast, fish offals, setting of nets, hauling of seines, and use of 'trawls' or 'bultows,' more especially at or around the Magdalen Island, your power and authority under such cases will be similar to that of any other fishery officer appointed to enforce the fishery laws in Canadian waters (*Vide Fisheries Act*).

If a foreign ship, vessel or boat be found violating the convention or resisting consequent seizure, and momentarily effects her escape from the vicinity of her capture or elsewhere, she remains always liable to seizure and detention if met by yourself in Canadian waters, and British waters everywhere if brought to account by Her Majesty's cruisers. But great care must be taken to make certain of the identity of any offending vessel to be so dealt with.

All vessels seized must be placed, as soon as possible, in the custody of the nearest customs collector, and information, with a statement of the facts, and the deposition of your sailing master, clerk, lieutenant, or mate, and of two at least of the most reliable of your crew be dispatched with all possible diligence to the government. Be careful to describe the exact locality where the violation of the law took place, and the ship, vessel or boat was seized. Also corroborate the bearings taken, by sounding, and by buoying the place (if possible), with a view to actual measurement, and make such incidental reference to conspicuous points and land marks as shall place beyond doubt the illegal position of the seized ship, vessel or boat.

Omit no precaution to establish on the spot that the trespass was or is being committed within three miles of land.

As it is possible that foreign fishing craft may be driven into Canadian waters by violent or contrary winds, by strong tides, through misadventure, or some other cause independent of the will of the master and crew, you will consider these circumstances, and satisfy yourself with regard thereto, before taking the extreme step of seizing or detaining any vessel.

On capture, it will be desirable to take part of the foreign crew aboard the vessel under your command, and place some of your own crew, a measure of precaution, on board the seized vessel; first lowering the foreign flag borne at the time of capture. If your ordinary complement of men does not admit of this being done, or if because of several seizures the number of your hands might be too much reduced, you will, in such emergency, endeavour to engage a few trustworthy men. The portion of foreign crew taken on board the government vessel, you will land at the nearest place where a consul of the United States is situated, or where the readiest conveyance to any American consulate in Canada may be reached, and leave them there.

When any of Her Majesty's vessels about the fishing stations or in port are met with, you should, if circumstances permit, go on board and confer with the naval commander, and receive any suggestions he may feel disposed to give, which do not conflict with these instructions, and afford him any information you may possess about the movements of foreign craft; also inform him what vessels you have accosted and where.

Do not fail to make a full entry of all circumstances connected with foreign fishing vessels, noting their names, tonnage, ownership, crew, port, place of fishing, cargo, voyage and destination, and (if ascertainable) their catch. Report your proceedings as often as possible, and keep the department fully advised on every opportunity, where instructions would most probably reach you at stated intervals.

Directions as to the stations and limits on which you are to cruise, and any further instructions that may be deemed necessary will, from time to time, be conveyed to you.

Considerable inconvenience is caused by Canadian fishing vessels neglecting to show their colours. You will draw the attention of masters to this fact, and request them to hoist their colours without requiring them to be hailed and boarded.

SESSIONAL PAPER No. 22

It cannot be too strongly urged upon you, nor can you too earnestly impress upon the officers and crew under your command, that the service in which you and they are engaged should be performed with forbearance and discrimination.

The government relies on your prudence, discretion and firmness in the performance of the special duties entrusted to you.

I am, sir, your obedient servant,

(Sd.) GEORGE E. FOSTER,
Minister of Marine and Fisheries.

I have found it difficult on occasions to make our own vessels use the bounty flag. The flying of this flag often saves the cruisers a large amount of unnecessary cruising, as it is sometimes impossible to tell a Canadian from a United States schooner at a distance.

LICENSES TO FOREIGN VESSELS.

The same Order in Council being passed as before, sanctioning the continuance of the issue of *modus vivendi* licenses to United States fishermen, similar permits were issued in 1900.

The form of the licenses is as follows :—

License to United States Fishing Vessels.

(Name) Master or Owner of the United States Fishing
Vessel tons register, of , having paid to the undersigned,
Collector of Customs at the port of , the sum of \$, being one
dollar and fifty cents per registered ton, the privilege is hereby granted to said fishing
vessel to enter the bays and harbours of the Atlantic coasts of Canada, for the purchase
of bait, ice, seines, lines, and all other supplies and outfits, and the transshipment of
catch, and shipping of crews.

This license shall continue in force for the year 1896, and is issued in pursuance of the Act of the Parliament of Canada of 1892, entitled, 'An Act respecting Fishing Vessels of the United States,' 55-56 Victoria, chapter 3.

This license, while conferring the above-mentioned privileges, does not dispense with a due observance by the holder, or any other person, of the laws of Canada, and will become null and void, and forfeited forthwith, and the vessel will become ineligible to obtain a license in future, if any goods or supplies, or other advantages obtained hereunder, are sold or transferred to any United States fishing vessel that has not obtained a license.

Dated this day of A.D., 189

Collector of Customs at the port of

.....

For Minister of Marine and Fisheries.

SCHEDULE of United States Fishing Vessels to which Licenses were issued under the Act entitled 'An Act respecting Fishing Vessels of the United States of America' during the Year 1900.

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.	
				\$	cts.
Levanter	Salem, Mass.....	28	Yarmouth, N.S.....	42	00
Patriot	Gloucester "	58	Halifax, N.S.	87	00
Emma Osier.....	Eastport "	22	North Head, N.B.....	33	00
James S. Steele.....	Gloucester "	50	Yarmouth, N.S.....	75	00
W. H. Moody.....	" "	48	Halifax, N.S.....	72	00
John L. Nickerson.....	" "	92	Pubnico, N.S.....	138	00
Meteor.....	" "	96	Yarmouth, N.S.....	144	00
James R. Clark.....	Salem "	66	"	99	00
Eleazer Boynton.....	Gloucester "	63	Pubnico, N.S.	94	50
Columbia.....	" "	89	"	133	50
Essex.....	" "	84	"	126	00
Senator Saulsbury.....	" "	77	"	115	50
Electer.....	" "	84	Tusket, N.S.....	126	00
Blue Jacket.....	" "	86	"	129	00
Wm. E. Morrissey.....	" "	93	"	139	50
Senator Gardner.....	" "	94	Yarmouth, N.S.....	141	00
Winona.....	" "	78	Pubnico, N.S.	117	00
Maggie and May.....	" "	88	Yarmouth, N.S.....	132	00
Mabel D. Hines.....	Beverly "	92	Tusket, N.S.....	138	00
Thetis	Gloucester "	67	"	100	50
Mystery.....	" "	89	Pubnico, N.S.....	133	50
Fernwood.....	" "	96	Yarmouth, N.S.....	144	00
Corsair.....	" "	78	Shelburne, N.S.....	117	00
Parthia.....	" "	77	Yarmouth, N.S.....	115	50
Hazel Oneita.....	" "	73	"	109	50
Shanandoah.....	" "	77	Barrington, N.S.....	115	50
I. I. Flaherty.....	" "	124	Shelburne, N.S.....	186	00
Alice R. Lawson.....	" "	85	Tusket, N.S.....	127	50
Virginia.....	" "	81	Yarmouth, N.S.....	121	50
Masconoma.....	" "	67	Pubnico, N.S.....	100	50
Golden Hope.....	" "	75	"	112	50
Robin Hood.....	" "	65	"	97	50
Helen F. Whittier.....	" "	92	Yarmouth, N.S.....	138	00
Salem R. Crane.....	Salem "	52	Digby, N.S.....	78	00
Lawrence A. Munroe.....	Gloucester "	84	Barrington, N.S.....	126	00
Lucille.....	" "	72	Halifax, N.S.....	108	00
Grayling.....	" "	87	Barrington, N.S.....	130	50
Emma E. Witherell.....	" "	81	Lockeport, N.S.....	121	50
Howard Holbrook.....	" "	68	Yarmouth, N.S.....	102	00
Harry G. French.....	" "	67	"	100	50
Hattie A. Heckman.....	" "	73	Halifax, N.S.....	109	50
Ralph A. Hodgdon.....	" "	59	Canso, N.S.....	88	50
Richard Lester.....	" "	47	North Sydney, N.S.....	70	50
Speculator.....	" "	77	Canso, N.S.....	115	50
Edward Trevoys.....	" "	66	Port Mulgrave, N.S.....	99	00
Margaret.....	Beverly "	107	Tusket, N.S.....	160	50
D. A. Wilson.....	" "	61	"	91	50
A. S. Caswell.....	Gloucester "	46	Canso, N.S.....	69	00
Elhe M. Morrissey.....	" "	83	Pubnico, N.S.....	124	50
Mabel Leighton.....	" "	48	Souris, P.E.I.	72	00
Procyon.....	" "	85	North Sydney, N.S. ..	127	50
Orpheus.....	" "	74	"	111	00
S. R. Lane.....	" "	48	Lockeport, N.S.....	72	00
Latona.....	" "	71	Canso, N.S.....	106	50
Judique.....	" "	89	"	133	50
Sea Fox.....	Provincetown, Mass.....	71	St. Peters, N.S.....	106	50
Ada S. Babson.....	Bucksport, Mass.....	99	"	148	50
Louis and Rosie.....	Booth Bay "	48	Pubnico, N.S.....	72	00
A. T. Gifford.....	Gloucester "	58	North Sydney.....	87	00
Anna L. Sanborn.....	Beverly "	17	Yarmouth, N.S.....	25	50
Bessie M. Devine.....	Gloucester "	91	Amherst, M.I., Que....	137	10
Daniel C. Baker.....	Eastport, Me.....	33	Campobello, N.B.....	49	50
Willie L. Swift.....	Provincetown, Mass.....	69	St. Peters, N.S.....	103	50
Freddie W. Alton.....	" "	67	"	100	50
Preceptor.....	Gloucester, Mass.....	89	Port Hawkesbury.....	133	50
Ruth M. Martin.....	Boston "	94	Shelburne, N.S.....	141	00

SESSIONAL PAPER No. 22

SCHEDULE of United States Fishing Vessels to which Licenses were issued—*Continued.*

Name of Vessel.	Port of Registry.	Tonnage.	Port of Issue.	Fee.
				\$ cts.
Edith McIntyre.	Booth Bay, Mass....	126	St. Peters, N.S.....	189 00
S. L. Foster.	Cranberry Isles, Mass	30	Canso, N.S.....	45 00
George Temple.....	New York, N.Y....	44	Yarmouth.....	66 00
Esperanza.....	Rockland, Me.....	24	Halifax, N.S.....	36 00
Thalia	Gloucester, Mass....	78	Digby, N.S.....	117 00
T. W. Holmans.	" "	44	Port Mulgrave, N.S....	66 00
Marguerite.	" "	81	Barrington, N.S.....	121 50
Anglo-Saxon.....	" "	72	Arichat, N.S.....	108 00
Rigel.	" "	87	Canso, N.S.....	130 50
Hattie and Lottie... .	Boston "	96	Halifax, N.S.....	144 00
Helen Miller Gould... .	Gloucester "	99	"	148 50
A. R. Crittendon.....	" "	56	Liverpool, N.S.	84 00
Total.....	.....	5,652		8,478 60

Number of vessels.....	78
Amount of tonnage.....	5,652
Amount received for fees.	\$8,478 60

The following is the statement of the number of licenses issued to United States fishing vessels in each season since 1888 :—

1888	36
1889	78
1890	119
1891	98
1892	108
1893	71
1894	53
1895	47
1896	77
1897	40
1898	79
1899	80
1900	78

Attached is a list of United States fishing vessels which have entered Canadian ports from October 31, 1899, to October 31, 1900, showing the number of times each vessel entered. The large number of these total entries, 248 vessels and 1,009 entries will illustrate to what a great extent United States fishermen make use of our ports.

LIST of United States Fishing Vessels which have entered Canadian Ports from October 31, 1899, to October 31, 1900, showing the net Tonnage and the number of times each Vessel entered the several Ports.

Number.	Name of Vessel.	Net Tonnage.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total entries.
1	A. E. Whyland.....	93			3				1	3									1		8
2	A. R. Crittenden	56			3				3		2		1				3		1		13
3	A. S. Caswell.....	46		2	2								1		1		3			1	10
4	A. S. Sanford.....	17																		3	3
5	A. T. Gifford	59			1		1		2				2	1		1	2				10
6	Ada R. Donovan	72					1														1
7	Addie M. Story.....	40																		1	1
8	Admiral Dewey.....	78	1			1	4							1							7
9	Agnes B. Gleason	44															1				1
10	Alcina.....	53															1				1
11	Alice M. Parsons	43							1	1							2				4
12	Alice R. Lawson.....	85			1		1				2										4
13	American.....	99									1						1				2
14	Anglo Saxon.....	72	3											2			1				6
15	Anna L. Sanborn.....	33								1											1
16	Annie E. Lane.....	30								1										1	5
17	Annie Greenlaw.....	69			2		1	1	1								10				15
18	Annie Wesley.....	65			1				2												3
19	Arbitrator.....	72															1				1
20	Arbutus.....	86			2				1		1										4
21	Argo.....	79			2						1										3
22	Arthur D. Story.....	98															1				1
23	Atlanta.....	75			1				1												2
24	Belle Franklin.....	52		5																	5
25	Belle J. Neale.....	95															2				2
26	Bertha D. Nickerson.....	89					1						2								3
27	Bertha May.....	75		1																	1
28	Bessie M. Devine.....	91											1							1	2
29	Blanche.....	78															2				2
30	Blue Jacket.....	86			4								1								3
31	Boyd & Leeds.....	36		2						1							1				4
32	Canopus.....	68																		1	1
33	Carleton Belle.....	104			1												1				2
34	Caroline Vought.....	78					1		1	1							3			1	7
35	Carrie W. Babson.....	62												1					1		2
36	Cecil H. Low.....	75	1														1				2
37	Centennial.....	86					1												1		2
38	Columbia.....	89			6	1					1					1					9
39	Commonwealth.....	60							2	1	1					3					7
40	Conductor.....	50			1			1	1				2								5
41	Corsair.....	79	1												1	1	1				4
42	D. A. Wilson.....	61			3				1				2				1				7
43	Dido.....	78							1												1
44	Dora A. Lawson.....	93											1								1
45	E. C. Hussey.....	41			1															1	2
46	E. H. King.....	89														2		1			3
47	Edith M. Prior.....	78		1													3				4
48	Edith S. Walen.....	83		1			2		1								1				5
49	Edith S. Wells.....	52						1													1
50	Edward A. Perkins.....	86			1		1														2
51	Edward A. Rich.....	58		1					1								2			1	5
52	Edward S. Eveleth.....	61												1							1
53	Edward Trevo.....	66			2		1		6	1	1					1	3				15
54	Edwin B. Holmes.....	49															1				1
55	Effie M. Morrisey.....	83			1				1				1				1				4
56	Eleazer Boynton.....	63			5												1	1			7
57	Electa A. Eaton.....	73							3								1				4
58	Electra.....	84					1														1
59	Eliza B. Campbell.....	69			3		1										1				5
60	Eliza H. Parkhurst.....	84					1		1								6				8
61	Ellen F. Gleason.....	42			2				3					1	1					1	8

SESSIONAL PAPER No. 22

LIST of United States Fishing Vessels which have entered at Canadian Ports from
October 31, 1899, to October 31, 1900, &c.—*Continued.*

Number.	Name of Vessel.	Net Tonnage.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P.E.I.	Whitehead.	Yarmouth.	Total entries.
62	Elsie M. Smith.....	83							2				1				1		2		6
63	Emma E. Wetherell..	82			2				4	2									1		9
64	Emma and Helen.	62							1	1							2				4
65	Esperanza.	24					2		2			2					1				7
66	Essex..	68			4				2	2			3								9
67	Ester Anita.....	71					1	1	3	3							3				13
68	Everett Pierce.....	65			1					2											3
69	F. S. Willard.....	36																		1	1
70	F. W. Homans	44			1				1					1		1		1			5
71	Fannie Hayden.....	20																		2	2
72	Fannie S. Orne	80							1												1
73	Fannie W. Freeman.	64															1				1
74	Fernwood.....	96			1		1				1		3							2	8
75	Flora L. Nickerson.....	63															3				3
76	Florence.....	63					1		1								1				3
77	Florence E. Stream.	66															3				3
78	Freddie W. Alton..	67									1										1
79	Gardner W. Tarr	62																		1	1
80	George F. Edmunds.....	110			1		1						1						1		4
81	George Temple.....	44								1							1			4	6
82	Georgie Campbell.....	78							1					1	1	1	1				5
83	Gladstone	74																	1		1
84	Gloriana.....	76			1								1				1			1	4
85	Golden Hope	75							1	1							3				5
86	Golden Rod.....	98					1						1						1		3
87	Grace Choate.....	39							1												1
88	Grace Darling	47					1		4								2				7
89	Grayling	87	1				1		2	1							4				9
90	Harry G. French.....	67		1	1			1		1			1				2				7
91	Harvard	76					1														1
92	Harvester	96			1				1					1			3				6
93	Hattie A. Heckman.....	72					1			1							2				4
94	Hattie Evelyn.....	66					1										2				3
95	Hattie L. Trask.....	48			1		1	1	1								4				8
96	Hattie & Lottie.....	96					1													1	2
97	Hattie M. Graham.....	105			1														1		2
98	Hazel Oneita	72					1													1	2
99	Helen F. Whittin	92			1						1		2		1					2	7
100	Helen G. Wells.....	66					2										1				3
101	Helen M. Gould.....	99					1														1
102	Helen May Butler..	33					1														1
103	Henri N. Woods.....	84			2				1									1	1		5
104	Henry Ellsworth.....	56														1					1
105	Henry M. Stanley.....	82			1		1		1				1				2				6
106	Henry W. Longfellow....	77															1				1
107	Herald of the Morning....	68							1												1
108	Hiram Lowell.....	95					1		1								1		1		4
109	Horace B. Parker.....	62														1					1
110	Howard Holbrook.....	68			1					1							1				3
111	Indiana.....	88															2				2
112	Iolanthe	49															2				2
113	J. E. Garland.....	57															1			1	2
114	James R. Clark	66		1						1										15	17
115	James S. Steele.....	50			1												1				3
116	Jennie B. Hodgdon	85						1									1				2
117	John J. Flaherty.....	124									1		1				1				3
118	John L. Nicholson.....	92			7															1	8
119	John S. Presson	63				1			1						1			1			4
120	John Nye.....	58							4												4
121	Joseph B. Maguire.....	61											1								1
122	Joseph P. Johnson.....	93															1				1
123	Joseph Row.....	97			1								1						1		3
124	Joseph W. Dauphiney....	80															1				1

64 VICTORIA, A. 1901

List of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1899, to October 31, 1900, &c.—*Continued.*

Number.	Name of Vessel.	Net Tonnage.	Arichat.	Barrington.	Canso.	Georgetown, P.E.I.	Halifax.	Liscombe.	Liverpool.	Lockeport.	Louisburg.	Lunenburg.	North Sydney.	Port Hawkesbury.	Port Hood.	Port Mulgrave.	Shelburne.	Souris, P. E. I.	Whitehead.	Yarmouth.	Total entries.
125	Jubilee.....	87						1									3				4
126	Judique....	89			3										1		1			1	6
127	Julia Costa.....	97															1				1
128	Juniata.....	49															3				3
129	Kearsarge.....	78							1												1
130	Kentucky.....	91											3				4				7
131	Latona.....	71		2	3												1		1		7
132	Laurel.....	73											1								1
133	Lavanter.....	28		1						1										6	9
134	Lawrence A. Munro.....	84		2	4					1			3		1	1					12
135	Lawrence Murdoch.....	42					1										1			1	3
136	Lena & Maud.....	75											2								2
137	Lewis H. Giles.....	94									1		3						1		4
138	Lizzie Giffin.....	71					1														1
139	Lizie M. Center.....	77											1								1
140	Lizzie M. Stanwood.....	76					1		4												5
141	Lizzie Maud.....	49								1											1
142	Loring B. Haskell.....	67							1				1								2
143	Lorna Doone.....	48							3												3
144	Lottie E. Hopkins.....	47							1	1											2
145	Louis & Rosie.....	48			1				1												2
146	Lucille.....	71			3		2						1			1	4				11
147	Lucinda I. Lowell.....	77															2				2
148	M. H. Perkins.....	50															1				1
149	M. S. Ayer.....	76			1																1
150	Mabel D. Hines.....	92			4		2														6
151	Mabel Leighton.....	48					2		1				1	1	1		2	1			9
152	Madonna.....	79								1											1
153	Maggie and May.....	88					1				2		2							1	6
154	Margaret.....	107	1		5	1	1						2			1			1		12
155	Margaret Leonard.....	31															1			1	2
156	Margaret Mather.....	66							1	2							1				4
157	Marguerite.....	81		3																	3
158	Marguerite Haskins.....	72											1								1
159	Marshall L. Adams.....	125					1														1
160	Martha A. Bradley.....	72							2							2		1			5
161	Mary A. Gleason.....	65															2				2
162	Mary F. Chisholm.....	70		4																	4
163	Masconomo.....	67							1		1						3			1	6
164	Mathew Kearney.....	69		2																1	3
165	Mattie Winship.....	73							1											1	2
166	Maud M. Story.....	53								2						1	1				4
167	Mermaid.....	76	1																		1
168	Metor.....	96			6												1			1	8
169	Miranda.....	76	2		1				2								1				6
170	Monarch.....	92			1											1					2
171	Mondego.....	76															2				2
172	Monitor.....	98			1				2		1						2				6
173	Mystery.....	89	1		5		1			1	1				1						10
174	Nannie C. Bohlin.....	96					2		1				1	1			2				7
175	Nellie Dixon.....	68							2								1			7	10
176	Nelson Y. McFarland.....	65							1												1
177	Nereid.....	69							1								4				5
178	Niagara.....	78					1		2									1			4
179	Norman Fisher.....	51							1												1
180	Norman Johnson.....	51							1												1
181	Norumbega.....	91						1						1							2
182	Nourmahal.....	86							1	1	1	1					4			1	9
183	Ozla.....	77							1				1								2
184	Oliver F. Killam.....	43															1				1
185	Oliver Wendell Holmes.....	75			1																1
186	Olympia.....	50											2								2
187	Oregon.....	79													1	1					2

SESSIONAL PAPER No. 22

LIST of United States Fishing Vessels which have entered at Canadian Ports from October 31, 1899, to October 31, 1900, &c.—*Concluded.*

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188	Orpheus.....	74	2		1			4		6			1	1			2		1		18
189	Parthia.....	77	1		3								2						1		7
190	Patriot.....	58	1		1		3		1								1				7
191	Pauline.....	51															1				1
192	Pendragon.....	68	1				1														2
193	Phalia.....	72																		1	1
194	Pinta.....	69														1	1				2
195	Polar Wave.....	86																1			1
196	Preceptor.....	89					1							1							2
197	Priscilla Smith.....	89																		1	1
198	Procyon.....	85			2								1			1					4
199	Puritan.....	62			1		1		1				1								4
200	Quickstep.....	77	1					1									2				4
201	Ralph E. Eaton.....	69																		1	1
202	Ralph F. Hodgdon.....	60	1		1	1	1	1	1								1	1	1		9
203	Ralph Russell.....	48															1				1
204	Ramona.....	58															2				2
205	Reporter.....	59							1												1
206	Richard Lester.....	47			1				1				1								3
207	Richard Wainwright.....	98			1																1
208	Rigel.....	87			1									1			4				6
209	Robin Hood.....	65			1				2				2		1						6
210	Rozella.....	34							1								1				2
211	Ruth M. Martin.....	93			2			1	1								5				9
212	S. F. Maker.....	78			1												3				4
213	S. L. Foster.....	30			3				1		1										5
214	S. P. Willard.....	87					1	2			1						3				7
215	S. R. Hane.....	47							1	2											3
216	Samuel R. Crane.....	52															1			2	3
217	Sea Fox.....	71					3	1													4
218	Senator.....	77			1			1													2
219	Senator Gardner.....	94									1		2							1	4
220	Senator Saulsbury.....	77			7								1		1	1	1				11
221	Sheffield.....	61		6													2				8
222	Shenandoah.....	77		2	2				1	1											6
223	Sigfrid.....	51			1																1
224	Speculator.....	77			1		1									1	5		1		9
225	Stella.....	78						1													1
226	Susie Hooper.....	50			2			1									1				4
227	Tacoma.....	71														1	1				2
228	Talisman.....	88						1	1												2
229	Thalia.....	78					1		2	2							1				6
230	Thetis.....	67			2		1				2		2						1		8
231	Thomas Brundage.....	69																		1	1
232	Thomas Sumner.....	70						1													1
233	Tidal Wave.....	66			1		1										1				3
234	Titania.....	77					1			1		1	1				3				7
235	Triton.....	67															2				2
236	Valkyria.....	104					1									1		1			3
237	Vandalia.....	87																		1	1
238	Vera.....	77							1					1		1	1				4
239	Vigilant.....	87			2		1						2				4				9
240	Virginia.....	81			1				3		1		1			1				1	8
241	Volant.....	96			1												5				6
242	Vyking.....	95							1												1
243	W. E. Morrissey.....	93			3								3		1	1					8
244	W. H. Moody.....	48			2		4														6
245	W. M. Young.....	86														1					1
246	William H. Rider.....	45			1												1				2
247	William Matheson.....	72					1														1
248	Winona.....	78			6		1						1								8
Total.....		17640	19	37	168	5	79	24	122	51	28	4	79	17	15	27	222	11	22	79	1009

OFFICERS' REPORTS.

Reports of Captains Commanding Canadian Cruisers, as follows:

CRUISER 'CURLEW'.

ST. JOHN, N.B., December 31, 1900.

Commander O. G. V. SPAIN, R.N.,
Commanding Fisheries Protection Service.

SIR,—I have the honour to submit to you herewith my annual report on the various duties performed by this ship during the past season of 1900. While laid up at this port last winter, the boilers and machinery were put in thorough repair, including the shipping of a new propeller. Other minor repairs were made throughout the ship, rendering her staunch and seaworthy, and on Easter Monday, April 16, the ship was placed in commission, ship's company signed on the ship's book, and at noon, we steamed down to our cruising grounds at the mouth of the Bay of Fundy. On inquiring at the various fishing stations we found that fish of all kinds were beginning to strike in on the fishing grounds, weir building was being rapidly pushed forward, and every preparation was being made by the fishermen in their various ventures, anticipating a prosperous seasons work.

Owing to the strong rivalry among the numerous weir owners, engendered by their intense desire to secure good weir locations, numerous weir disputes resulted, requiring considerable time and patience from us in their settlement. The Easport sardine syndicate, having contracted with the majority of the weir owners to pay them \$4 per hogshead for the catch of herring in their weirs, was the cause of the extraordinary energy displayed by the weir owners. Only a few years ago a weir owner would feel offended if he was not offered at least \$5 per hogshead. However, it is a pleasure to report that many times during the year the prices for fish went far above \$4 per hogshead, for on one occasion, at the mouth of the Magaguadavic River, during November, I was an eye witness to sardine herring being bought at \$22.75 per hogshead.

In connection with the foregoing work my time was fully occupied in distributing bounty cheques, issuing instructions to the several fishery officers, landing lighthouse supplies, and other work required in connection with the various fisheries. Fishery matters were proceeding harmoniously when your telegram arrived on May 18, ordering us to cruise on the Nova Scotia coast between Cape Sable and Prospect, with a view to meet the United States mackerel seiners on their first arrival on that coast. Fogs and gales prevented us from proceeding there till May 21, when we steamed across the Bay of Fundy, replenishing our bunkers at Yarmouth, and at noon of the 23rd, we had Cape Sable abeam. No foreign fishing vessels were sighted, but that evening, at sunset when anchoring at Lockeport, we were informed that two United States seining schooners had called there a few days previously, having arrived directly from Gloucester. I was informed that those two vessels were unsuccessful in their search for mackerel, owing to the bad weather off the coast.

I might state here that the first mackerel taken on the south shore this spring were taken in the nets off Green Island, Cape Sable, on May 12, several days later than the first catch last spring. The first mackerel each season are generally taken in the traps located near Yarmouth, between May 8, and 12.

At the urgent solicitation of some of the leading citizens of Lockeport, we decided to spend the Queen's birthday there, and, in honour of the day, the customary salute was fired and the ship decorated with bunting in rain-bow fashion. Resuming our cruise along the coast to the eastward we found the local fishermen enjoying fair catches

SESSIONAL PAPER No. 22

of mackerel in their nets, but no foreign seining vessels were sighted. At Lunenburg, on May 26, I was informed by the fishermen that only one of the United States fleet had got any mackerel in that vicinity. The schooner's name was the '*Nourmahal*,' and she had taken twenty-six barrels of fine mackerel eight miles off Cross Island, on the 22nd instant.

Two days were occupied here by blowing down boiler and repairing an open seam in the funnel, then we returned westward as far as Brazil Rock, sighting no foreign seiners on the trip.

A perceptible decrease could be noticed in the number of United States mackerel seiners on the Nova Scotia coast this spring seeking mackerel, which can be attributed to the unusually large hauls made by them on the American coast, and gave them a splendid season's work there. The fishery reports show that they have made some remarkably large hauls of mackerel on the Massachusetts and Maine coasts, in fact, surpassing the catches of previous seasons. It is to be regretted that they fail to show up in the same abundance in our waters, but, having very few vessels on the lookout for them on our coasts, we were somewhat in the dark regarding our mackerel schools and their movements.

Several of the Halifax pilot schooners carry with them, during the mackerel season, a seine and boat, and without interfering with their regular pilotage duties manage to take several good hauls of mackerel each season, thereby extending their income to a considerable extent.

Cruising between Sambro and Cape Sable was continued until June 10, returning then to the Bay of Fundy. At Yarmouth we replenished our bunkers, and on June 12, with Captains Smith and Douglas on board, we proceeded to Grand Manan, and those gentlemen inspected the life-boat station at Seal Cove. The following day we ran over to Digby, our visitors leaving the ship there.

Inspecting the various fisheries in the bay occupied our time for the remainder of the month, finding them all progressing favourably, weir building almost completed, and all the larger sized craft busily engaged on the several fishing grounds. Several of the Eastport sardine factories were in operation, but nearly all of their herring that they were canning were from the Canadian side, very few herring, at that date, being taken in the American weirs.

While at St. John on June 29 we had the pleasure of a visit from you, with a view to investigate at Grand Manan the fishing for pollock by the rather startling method of exploding charges of dynamite among the schools. At Grand Manan you procured information regarding this practice, and gave me instructions as to my course with reference to it.

This method of fishing, I might observe here, was conceived during the winter months by a fisherman who was familiar with the method of exploding the dynamite signal bombs on Gannet Rock by a small battery. The idea struck him that exploding dynamite in the water among the schools of pollock would be a lazy and at the same time a paying method of fishing, even if it did prove destructive to the fisheries in the near future. While at White Head, Grand Manan, receiving bounty claims recently, I was informed by the fishermen of that place who had been using dynamite, that they were well pleased with the method and the numbers of fish killed. They invariably insisted that they carried on their unpopular practice over three marine miles seaward from the Old Proprietor Ledge at all times, but I very much doubt their statements.

I sincerely trust that you will have some regulation enacted that will prevent boats from fitting out for dynamiting fish of any kind, or, some other method of stopping the practice, which undoubtedly must have an injurious effect. I am reliably informed that more fishermen will engage next season in dynamiting fish, if something is not done to prevent it.

We were busily employed in the waters of Quoddy till July 11, when another cruise of the Nova Scotia coast was commenced. Dense fogs delayed us somewhat, but on July 14 we rounded Cape Sable, arriving at Halifax next morning at daylight. Our machine gun, with ammunition, was issued to us there, and the steamer *Florence C.* was received from the owners and taken by us into the fisheries service.

64 VICTORIA, A. 1901

On the 17th, in company with the *Florence C.*, we proceeded to Liscombe and Isaac's Harbour where her crew was shipped and her outfit completed, and she began her work enforcing the lobster regulations on the coast between St. Margaret's and Chedabucto Bays.

Arriving at Louisbourg on July 21, the ship was bunkered, calling into North Sydney on the 23rd. Mr. Bertram, inspector of fisheries for Cape Breton, joined our ship here, and we set out for a cruise of inspection of the fisheries around the north part of the Island. We called at Ingonish, Aspy and Pleasant Bays, Meat Cove, and other places, arriving at Cheticamp on the 25th, having visited nearly all the lobster factories as we skirted the coast. We remained there a day, while the inspector visited a wonderful salmon river, where some improvements were in progress.

Returning northward from there, cruising along the shore, North Sydney was reached on the 28th, and Mr. Bertram, on leaving the vessel expressed his satisfaction with his trip and the good results that would surely follow our unexpected appearance at the several lobster factories in Cape Breton.

Telegraphic orders were received from you at this time, directing us to return westerly, and at the same time narrowly observed the several harbours for illegal fishing. Louisbourg was visited for bunkering purposes, and on the 3rd of August we resumed our progress to the westward. August 5, in a dense fog, we rounded Cape Sable, arriving at Eastport, Maine, next morning at daylight, where you joined us for a run on the St. Croix River to St. Stephen. Next day you left us at St. John, and we immediately returned down the bay.

Fishery matters of various kinds occupied our attention until September 13, when once more we turned the ships heads towards Cape Breton. That night we anchored at Shelburne, and on the 16th put into Isaac's Harbour, where six seamen were shipped to complete our complement. Some target practice was indulged in here, for the benefit of the new men, in view of an apparent desire among the crew to again bring over to the Bay of Fundy the Challenge Cup for rifle shooting. Georgetown, P.E.I., was reached on Saturday, September 22, and the athletic sports which occupied the 24th and two following days, I can safely state, excelled all our meetings of previous years. The several events were very warmly contested, and, although circumstances of a nature not always under control prevented us from carrying the rifle shooting cup back among the fierce tides and fogs of the Bay of Fundy, still we feel that its possession has only been postponed for a year, and we also feel that it is for the good of our service if we annually allow this cup to pass from ship to ship in the fleet.

Steaming through the Gut of Canso, Louisbourg was reached on September 28, where we were compelled to spend five days in scaling boiler and bunkering ship. Leaving that historic place astern on October 4, we proceeded to skirt along the coast on our return to the waters of Passamaquoddy. Calling at Arichat, Canso, and the numerous other ports en route, orders were received from you to proceed to Campobello, and assist there in the annual Fish Fair Regatta. Arriving there on the 18th, I found that the Society's officers had appointed me as one of the judges of the sailing races. All the aquatic sports were very successful, being started and finished from the stern of *Curlew*.

Enforcing the lobster and other fisheries regulations, among the numerous bays and inlets that compose this district completely occupied our time till Sunday, November 11, when we steamed from St. John to the island of Grand Manan and there began the collection of the fishermen's bounty claims, and transacted other business, in order to clear up the season's work. With the exception of a run to Yarmouth on the 2nd instant, the bounty work was completed sufficiently on the 17th instant to permit of us steaming to this port, paying off the ship's company, and placing ship out of commission.

A supplementary report, showing the cost and other particulars of the several departments of this ship is nearing completion and will be submitted to you very shortly.

I have the honour to be, sir,

Your obedient servant,

JOHN H. PRATT,

Commanding Curlew.

SESSIONAL PAPER No. 22

CRUISER 'KINGFISHER.'

GRAND MANAN, N.B., Dec. 20, 1900.

Captain O. G. V. SPAIN,

Commanding Fisheries Protection Service of Canada.

SIR,—I have the honour to report on the work performed by the Dominion cruiser *Kingfisher* under my command, during the season of 1900.

The ship commissioned on April 16, and sailed on the 25th for Port Hawkesbury, where we arrived on the morning of the 27th. While there I received orders to proceed to Charlottetown but, owing to the large fields of drift ice in North Bay, could not reach that port until the May 2. The ship's company were measured for uniforms by Messrs. John McLeod & Co., tailors, while in port.

On May 7, instructions were received to proceed to cruise east of Halifax, making Liscomb headquarters. On May 26 a fleet of American seiners (thirteen in number) passed to the eastward. Large schools of mackerel were sighted by us a day before the fleet arrived. On the 29th of that month I cruised east calling at Louisburg and Sydney. The seiners found no fish after passing Louisbourg—most of their catch was taken west of Canso.

We returned west on June 7, cruising off Canso until the 25—we then proceeded to Port Hawkesbury to have the ship cleaned and painted and to have some repairs made to the step of foremast. June 28 we hauled over on the slip and on July 4, all repairs being completed, the ship was launched.

We sailed on the 5th with orders to take up station from Liscomb to Scatarie with headquarters at White Haven, which is noted for its beautiful harbour extending far into the interior, the head of which teems with those speckled beauties so eagerly sought after by the sportsmen. I continued to cruise about this station as far west as Liscomb, calling frequently at Isaac's Harbour—one of the prettiest little towns on the south-east coast of Nova Scotia.

The catch of lobsters on my station this season has been very good. The lobsters were larger than previous years, owing (the packers claim) to the rigid enforcement of the regulations re close season. I may say I saw very little if any disposition to break the law and fish lobsters after the close season commenced. I had the steam tender *Sea Bird* in connection with the *Kingfisher* which enabled me to visit all the small coves and harbours which it would have been impossible to enter with a deep draught vessel like the *Kingfisher*. This steam tender, which was employed one month, was very effective and did splendid work. Her speed of ten knots enabled me to cover a lot of ground in a day.

I wish to call your attention to what I consider a valuable spawning ground for herring and I am of the opinion it should be protected. The locality to which I refer is a part of the coast extending from western head of Fisherman's Harbour or Cape Mocomodome as marked in Admiralty Chart, westerly to Bickerton Harbour; extending off shore as far as the Pollux Rocks, also taking in the Castor Shoals. I visited Fisherman's Harbour about September 10—at that time the boats were taking herring in large quantities—from eight to fifteen barrels per boat. I boarded the boats myself and found they were all white with spawn nets, boats, and all the gear fully as much as you will see in the spawning season at the south-west head of Grand Manan. I am strongly of the opinion that this section should be protected by close season as the herring fishery is not very extensive in that part of the coast and this if protected would be a most valuable feeder. The great drawback to the shore fishermen on that coast is the bait. With the present system of cold storage being introduced by the department along the coast in connection with this protection of the herring spawning ground, I believe in a few years the supply of bait would be ample for all purposes.

On October 25 I sent the steam tender to cruise on the Cape Breton coast while with the *Kingfisher* I proceeded west making Shelburne headquarters, calling at Lunenburg on the way. Large schools of mackerel were seen by me off Halifax on the night of the 26th of that month—at the same time the *Helen Millie Gould* Captain Sol.

64 VICTORIA, A. 1901

Jacobs scooped in 400 barrels in one haul. We were only a little distance in shore of him when he made the catch.

I cruised off Shelburne till November 20, when I paid the ship out of commission. After paying off, the foremast was taken down and examined and, as it was found to be rotten, we had it replaced with a new Oregon pine stick, after which the ship was moored for the winter and housed in to protect the decks.

I have the honour to be, Sir,
Your obedient servant,

W. H. KENT,
Commanding Dominion Cruiser Kingfisher.

CRUISER 'CONSTANCE.'

QUEBEC, Dec. 6, 1900.

To Commander O. G. V. SPAIN,
Fisheries Protection Service,
Ottawa.

SIR,—In accordance with your instructions, I have the honour to submit to you the following report which is a summary of the work performed by the Revenue Cruiser *Constance* during the season of navigation just closed.

On January 24 last my engineers and stokers began the work of overhauling the engine and boiler, and fitting out ready for the summer's work.

February 19, Messrs Davies & Sons began work to extend deck-house aft, to cover in the after companion, and finished same on April 6. This work was very much required for the safety of the ship, and quite an addition to the comfort of those who have to pass nearly three fourths of their lives on the water.

April 5, crew arrived on board and were put to work at once to cut the ship clear of the ice. April 6, left our winter quarters at Indian Cove, Levis, and proceeded up to Quebec, where the crew were employed painting ship, taking in coal, ship's stores, provisions &c.

April 17, ship was reported as all ready for sea, and in reply received my instructions to proceed on my usual cruise down the gulf.

April 19, left Quebec cruising along the north shore and towards the east end of Anticosti, returning to Quebec on May 4.

May 6, returned on my cruise down the gulf with Fred. L. Jones, Esq., Inspector Customs, and delegation on board, arriving at Fox Bay, Anticosti on the 10th where the above gentlemen landed and returned to Quebec with same on 14th.

On June 1, Messrs. Fred. L. Jones and party arrived on board at Rimouski to take passage for Fox Bay, landing them there on the 4th, and returned to Quebec on the 12th waiting there further instructions.

From June 14, to July 16, our cruise was between Quebec, Anticosti, Gaspé coast, Northumberland Straits and Bay Chaleur.

July 18, to August 18, cruising along the Nova Scotia coast to Yarmouth. St. Mary's Bay, Bay of Fundy to Grand Manan Island, East port, Maine, St. John, N.B., and Digby, N.S., hence to Sydney, C.B., and Gut of Canso, returning to Gaspé on August 20.

August 21 to 28, cruising between Gaspé, Rimouski and the west end of Anticosti.

August 29, to September 8, was in Davie's dry dock, Levis, during which time we shipped new propeller, scraped and painted ship, had wheel chains overhauled and new pins made for wheel chain sheaves, &c.

SESSIONAL PAPER No. 22

September 9, received instructions from Mr. Fred. L. Jones to proceed to the Magdalen Islands to try and intercept the schooner *Gold Hunter* reported to be from St. Pierre Miquelon, and arrived at Grindstone on the 11th, where we found out from the collector of the port that she had arrived some days previous to our arrival. September 15, left the Magdalen Islands for up the gulf, via Anticosti, arriving at Quebec on the 18th.

September 21, was again instructed to proceed to the Magdalen Island to watch for the arrival of the above named schooner on the second trip from St. Pierre Miquelon. On the way down we were detained by an easterly gale and only arrived off Amherst Island light on the night of September 25-26, succeeded this time to intercept this vessel and seized her with nine barrels and kegs of liquors for contravention of the Customs Act.

From September 29, to October 21, our cruise was from Magdalen Island to Souris, P.E.I. Port Hawkesbury, Cheticamp, C.B., and the Northumberland Straits

By instructions received, arrived at Dalhousie, N.B., October 22, to meet Mr. Fred L. Jones, Inspector of Preventive Service.

From October 23 to 26, with Mr. Jones on board, cruised along the Baie des Chaleur and the Coast of Gaspé, at same time distributed some of the proclamation notices between Cape Rosier and Cape Chat.

October 31, arrived at Gaspé for coal.

November 5, by orders received, arrived at Quebec pending further instructions.

November 8, left Quebec for down the gulf, cruising along the south shore, and distributing ballot boxes between Cape Chat and Griffin Cove, arriving in Gaspé Basin on the night of the 13th for further instructions.

November 15, received orders to proceed to Quebec and arrived there on the 18th, meeting in with strong westerly winds and heavy falls of snow on the passage up.

November 20, was instructed to prepare ship to go into winter quarters.

November 30, placed ship safely for the winter in the Louise Basin. Paid off officers and crew—leaving the *Constance* in charge of Michel Dickey, as watchman, until further instructed.

During the night of September 12, experienced a terrific hurricane from the south-west, veering towards midnight to the north-west and north. It was with great difficulty we succeeded in getting under way from Amherst Harbour and reaching a safe anchorage under Grindstone Island.

During this gale the church steeple at House Harbour was blown down, a Halifax schooner was driven ashore, and went to pieces close to the *Constance* and much other damage was done to property on shore.

Again on the night of October 11, we experienced a similar blow while anchored in Egmont Bay, P.E.I., and after a most anxious night put into Summerside for shelter.

During this gale a large number of vessels were driven ashore at Sydney and other places. We counted eight, a few days later, stranded in the Gut of Canso.

On the night of October 16, we met with another furious gale and snow storm off Shippegan, N.B., from N.N.E., during which time we shipped one heavy sea, shifting the fore companion smashing in the windows of the chart room, and flooding petty officers quarters and deck.

Without exception, the months of October and November have been the worst for a continuance of strong gales and snow storms I have ever experience in the gulf, and when we consider the many wrecks and fatal disasters that have occurred of late we should feel thankful to be once more in a port of safety for the winter.

During the past season we boarded and searched forty-four vessels and covered over 15,500 miles.

I have the honour to be, sir,
Your obedient servant,

G. M. MAY.

A N N E X A
DETAILED REPORT OF THE FISHERIES INTELLIGENCE BUREAU.

HALIFAX, N. S., Dec. 31, 1900.

Commander O. G. V. SPAIN,
Commanding Fisheries Protection Service of Canada.

SIR,—I have the honour to submit the annual report of the Fisheries Intelligence Bureau for the season of 1900.

In connection with the bureau during the past year the stations comprised the following, viz: Fifty-five reporting and twenty-four bulletin. Two new reporting stations were established, as follows: Queensport, in charge of W. P. Scott, and Port Malcolm, in charge of R. G. Proctor.

The following is a summary received from the various stations showing the result of fishing operations for the season of 1900:—

NOVA SCOTIA.

CANSO.

Report from A. N. Whitman & Sons.

Codfish.—The inshore catch of codfish shows a diminution as compared with previous years, but it has been fully demonstrated that a fine body of fish is to be found from fifteen to fifty miles from this port, in what might be considered an intermediate between the inshore grounds and the great outer banks, and during a considerable part of the season squid are to be obtained on these grounds, in great abundance.

We are convinced that no such body of fish can be found anywhere along our coast in such close proximity to the seacoast, and with the bait in such abundance. The presence of the bait is the probable cause of the abundance of the fish; and while the bait continues to visit the grounds, codfish may be expected to frequent the same localities. There has been a considerable addition to our fleet this year of crafts suitable for the prosecution of this fishery and they have met with gratifying success.

Haddock.—The haddock fishery of the fall of 1899 and winter of 1900 was of much the same character as usual, closing a little earlier than some winters. This has become one of our most important branches of business. In addition to the quantity shipped away fresh in ice to the upper provinces, quite an extensive finnan haddie business has sprung up which bids fair to eclipse the fresh fish business.

Already thousands of dollars worth of haddies are shipped, giving employment to a number of hands in the preparation of them and the manufacture of the tidy boxes in which they are packed. A new smoke house has been erected this year which will bear comparison as to equipment with any in the old world or the new.

Hake.—Hake are not caught in any considerable quantity here. Occasionally a visit to the grounds west of Sable island will give us a larger supply of a fish that is taking its place side by side with the better known codfish.

Pollock.—Pollock continue to be caught in considerable quantities, and are growing in the esteem of the West India consumers of fish. They certainly constitute a very excellent substitute for the more popular codfish. When properly cured, without too much salt, they are an excellent food fish.

Mackerel.—The catch of mackerel here this season has been disappointing notwithstanding the larger quantities caught on the coast of the United States and the considerable summer catch west of Halifax. Of those caught here the larger part has been of mixed size.

SESSIONAL PAPER No. 22

Herring.—The quantity of herring caught on the coast in 1900 was small and its looks as though we might not look for the record of earlier years to be reached again. As the demand for these fish is on the decline, the catch is not of so much importance as it was forty years ago. Then almost everybody ate herring; now many never see them. A considerable increasing quantity is required for smoking, especially kippers and bloaters, and often the supply is not sufficient for these purposes.

Lobster.—The catch of lobsters showed no sign of falling off, and very high prices prevailing made the season one of the most profitable in the annals of the trade to the fishermen, but thoroughly unprofitable to the packers. This condition will have to change as no one cares to work many years in succession without some profit, and on this part of the coast the packers profit has been wiped out for some time past.

Squid.—The catch of squid for bait inshore this year has been disappointing and the result has been the loss of some thousands of dollars which might have been earned in the supplying of bankers, besides the loss to our shore fishermen due to the want of bait. Not many miles from land this bait fish has been plentiful for a great part of the season and a good body of fish has followed them. The laudable efforts of the Dominion government to establish bait freezers along the coast are meeting with gratifying success, and it looks as though in a few years every fishing port of any importance would be supplied with one. Properly managed they must materially add to the catch of fish.

Markets.—It looks as though we were going to be shut out of the United States market for the cheaper kinds of fish for some time to come. The Government of that country is evidently determined to do nothing to promote trade between the two countries except it be of the 'Jug' handled sort. Fortunately the population of our own country is growing rapidly and bids fair to grow even more rapidly in the coming years, affording a larger market each year for the produce of the sea.

We shall probably be able to hold our own in Porto Rico in spite of the hostile tariff established there, and in the markets of the world we can more than hold our own with our neighbours across the border.

We predict that in the coming years a trade both home and foreign in canned goods and small fancy packages will grow up that will give to Nova Scotia a prominence in that department of trade that will surprise even the most far sighted observers of the conditions of to-day.

CLARK'S HARBOUR.

Reporter: Mr. J. Lewis Nickerson.

Cod were first reported May 12th in fair quantities and continued such up to the middle of July. During the remainder of the season very light catches were made owing to the scarcity of bait. Seasons shipment estimated at 2,000 quintals.

Haddock fishing commenced May 15, with light catches, and varied from fair to poor throughout the season. 1,000 quintals were shipped during the season.

Herring were not reported here until September 5, when they appeared plentiful outside but were scarce in shore. The seasons catch, however, is very good, and is estimated at 1,500 bbls. This is a very large increase, in comparison with previous years.

Lobsters were first taken on December 15, and the catches until May 1, were good, February excepted. The number of crates of live lobsters shipped during the season was 3,804.

The total pack of cases canned is as follows:—

	Cases.
Cape Sable Packing Co	2,100
Jas. C. McGray	550
	<hr/>
	2,650

64 VICTORIA, A. 1901

Mackerel appeared first on May 17, but very few were taken during the season. The traps secured only 50 bbls.

Bait was very scarce at this station this season and greatly handicapped fishing.

DIGBY.

Reporter: Mr. J. M. Viets.

Alewives were taken in fair quantities on May 31.

Cod were first reported in fair quantities on May 15, and catches alternated from this to poor throughout the month. In June, with the exception of the first four days when the fishing was fair, the fish were reported plentiful for the whole month and good hauls were made. During July the fishing varied from good to poor and all the boats returned with half fares, owing to the scarcity of bait, which was very hard to obtain on this side of the Bay of Fundy, and several vessels were compelled to seek on American shores, for this important fish product. For the remainder of the season, the fish were reported very scarce. The total season's catch is estimated at 204,000 lbs., which is valued at \$7,140.

Haddock were not reported until June 8, when they were taken in fair quantities and again during the latter part of the month. The catches were very light afterwards until October 1, when they were reported plentiful. Total catch is estimated at 232,000 lbs., and valued at \$6,960.

Hake did not appear until June 12, when the catches varied from good to fair to the end of the month. There was a marked improvement in this fishery for the balance of the season, and from July 3 to October 1, hake was plentiful. From this date to October 15, fair fishing was reported. The seasons catch is estimated at 1,291,000 lbs., and valued at \$25,820.

Halibut.—This fishery was not reported, but the fishing has been considered fair. The Digby fleet operate off Yarmouth and land all their fares at that port.

Herring struck in on May 15 in fair quantities and continued so until June 5, afterwards becoming scarce for the remainder of the season, excepting a few days in August, when they were reported fair. The catch has been a small one and is estimated at 35 bbls., valued at \$100.

Lobsters were taken in fair quantities from May 21 to June 17, after which they were plentiful and good catches were reported daily to the close of the season. Total season's catch is valued at \$16,071.

Mackerel appeared in fair quantities on August 7, and were taken in hauls varying from good to fair during the month. On the 17th of same month they were reported schooling in St. Mary's bay.

It was reported on December 7 that the schooner *Quickstep* Captain Arthur Longmire, arrived at this port with 85,240 barrels of fresh fish on board. This was a result of four days fishing and was valued at \$1,604 40, and is considered the largest fare ever landed for a Digby market.

Mr. Viets says:—'This fishing district is not as good this season in all kinds of fish as formerly. There is a marked shrinkage of fish in the Bay of Fundy. Bait has been scarce and consequently the Digby fleet was handicapped. Fishermen complain that the American syndicate block them in getting bait from the Canadian traps on the north shore and further say that they often have to wait a week for bait as the syndicate attend to the requirements of the American fishermen first. Lobsters have actually decreased although the season's catch shows fairly well. There are many more pots for one lobster now than formerly and more ground gone over. The sardines factories are playing havoc with herring, consequently bait is scarce, and, as a matter of course fish fed is scarce and the fish are deserting their usual haunts.

HALIFAX.

Mackerel.—The catch this season here and vicinity was reported on an average fair. A big haul of this fish was reported at Herring Cove on Sunday morning

SESSIONAL PAPER No. 22

August 5. Over 100 barrels were taken from one net. This was the first big catch of mackerel made at the Cove during the past twenty-five years. On or about October 30 the American schooner *Helen M. Gould* arrived at this port, having just made a catch off Sambro, a distance about 15 or 20 miles off the harbor on her way home from the North Bay in which she used all her barrels, and was obliged to put in here to obtain salt and barrels. She was reported to have 340 barrels of large mackerel. The *Harvard* at this port on November 1 had 150 barrels.

The schooner *Helen M. Gould* stocked \$40,660 the crew sharing \$863.75 and is reported to be the best stock of the season, and the highest ever made in mackerel fishing in any season. A number of vessels have made stocks of about \$25,000.

ISAAC'S HARBOUR.

Reporter : *Mr. Simon M. Giffin.*

Alewives were not reported, but 100 barrels were taken during the season.

Cod were first reported on June 5, fair, and were taken, catches varying from good to poor during the remainder of the month. The fishing was fair from July 5 to 18, and scarce afterwards until August 11, when the fishing was again fair. Two days later, the 13th, codfish were plentiful, after which scarce to the first week in October, when very good catches were reported. Total catch for Isaac's Harbour, 500 quintals. Total for Fisherman's Harbour, Drum Head, and New Harbour was 1,500 quintals.

Hake were also not reported, but 100 quintals were taken this season.

Haddock although not reported, were taken in a catch estimated at 100 quintals.

Halibut were reported the first week in October, and about 200 pounds were taken.

Herring struck in fair quantities on June 30, and similiar catches were reported during July and August. On September 3, there was an improvement in this fishery and they were reported plentiful. September 8, saw the fish appearing in great abundance and excellent stops were made. The total catch for the season is estimated at 1,400 barrels.

Lobsters were reported fair on May 15, and varied in catches from good to fair until June 8, afterwards becoming scarce to the close of the season.

Mackerel were first taken on May 26, when 600 were reported in Goose Island trap and on the 28th 100 per fleet net were captured. Light and unimportant catches were made during June, but on the 21st of same month 100 were reported in traps at Goose Island. For the remainder of the season mackerel were scarce. Total catch 100 barrels.

Salmon, about 50 barrels were taken this season.

Squid, 100 barrels were taken during the season.

Trout, the catch this season reported at 100 barrels.

LIVERPOOL.

Reporter : *Mr. J. H. Dunlap.*

Alewives were taken in fair catches from May 17 to 30. Nothing was reported afterwards.

Cod were first reported on May 15, plentiful inshore, but the offshore fishery was poor. For the balance of the month fairly good hauls were taken. On the 26th, the fishing was reported good on the outside grounds as bait became fair, and in June the catch varied from good to fair. For the remainder of the season, codfish were taken in hauls from good to poor, when bait could be secured.

Haddock were taken in light quantities from July 31 to August 4.

Herring were reported fair on July 8, and to the 20th, from good to poor stops were made. On the 10th, herring of a small size were reported schooling along the

64 VICTORIA, A. 1901

coast and on August 25, a few were captured in nets. Herring were reported plentiful on September 15, at Port Mouton and a small quantity taken in nets.

Launce, fair catches were taken on May 9.

Lobsters were reported plentiful on May 7 and 8, and were taken in catches from fair to poor to the end of the month. For the remainder of the season the fishing was poor.

Mackerel appeared rather early this season, and on May 26, 12 of a medium size were taken to a boat. Large quantities were also reported on this date 14 miles offshore. The American schooner *Nellie Dixon* arrived in port on June 11, with 40 barrels. Schooling was reported on the 19th, 10 miles offshore and on the 22nd, in this harbour. For the balance of the month the fish was plentiful with traps averaging 30 barrels and drag seines from 30 to 75 barrels. On July 8 and 13, fair fishing was reported, although they were outside the harbour, mackerel were plentiful on the 21st, and 9 barrels of large size fish were reported in traps, and on the 30th, 12 barrels of large mackerel were trapped. During the first week in August, fair quantities were taken and schools reported. Dogfish was very annoying and fish were scarce until the 25th, when fair catches were made by nets. A few were taken in September.

Salmon of a small size were reported at Milton on July 4.

Trout were taken in fair catches on May 8.

Squid, when reported on August 3 and 13 were fair.

LOCKEPORT.

Reporter: J. R. Ruggles.

Cod were first taken in good quantities on May 2, and although the weather was very rough, during the month good catches were reported. On the 21st, one boat got 32 quintals, and another reported 51 quintals on the 25th. Fair catches were made daily from June 4 to July 15, when bait was reported plentiful, and excellent hauls were made from this date until August 20. During the remainder of the season the inshore fishery was poor, but the bank fisheries were very good. The season's catch is considered a little below that of last year's, and in addition to the total catch, 149 barrels or 5,364 gallons of cod oil are reported as having been extracted.

Haddock although not reported, appear to have been taken in fair quantities. The total season's catch, as per statement, shows a decrease of 25,696 pounds in comparison with last year's report.

Hake were also not reported and the total season's catch was 28,807 pounds which is 12,348 pounds below that of last season.

Halibut were first taken on May 19, with good catches. On the 21st, one boat reported 900 pounds. The total catch is estimated at 3,000 pounds, which is 2,000 a pounds less than the catch of 1899

Herring were first reported in fair quantities on July 19, and continued fair for about one week. They improved somewhat in August, and were reported plentiful in nets and traps on the 7th and 11th, and also on September 14. In November, large quantities were reported and good catches were being made with very favourable prospects for a fall's clean up. The season's catch is estimated at 4,600 barrels or 920,000 pounds which is an increase over last year's catch by 2,700 barrels.

Lobster fishing commenced on May 2, and the catches during the month varied from good to fair. About the 4th instant, the fishing was prevented by heavy sea, resulting in a serious loss of traps, &c. The fishing was poor afterwards to the close of the season.

Number of live lobsters taken for export..... 59,000

“ “ canned.....1,454 cases or 69,792 lbs.

The number of lobsters canned exceeded last year's by 454 cases but the quantity exported was 53,000 smaller.

SESSIONAL PAPER No. 22

Mackerel.—First appearance of any note was on June 8, when 100 were reported in nets at Western Head and the catches were light throughout the season. About 45 barrels or 9,000 pounds were taken this season.

Clams.—During the past season, 1,361 barrels were taken for bait.

Pollock were not reported, but the season's catch is estimated at 3,841 pounds.

Salmon.—Few were reported at Western Head on May 23 and 28.

CATCH of Fish at Lockeport for 1900.

Name of Vessel.	Catch.	Oil.
	lbs.	brls.
Lawrence.....	265,000	45
Helene.....	348,560	19
A. M. Gordon.....	340,000	22
Springwood.....	567,000	15
Agatha.....	390,000	22
Alina.....	263,500	13
Lottie A. Burns.....	357,000	13
Edith.....	90,100	
Altina.....	85,000	
Jennie B.....	39,950	
Charlie Richardson.....	76,500	
Icelda.....	43,500	
News Boy.....	68,000	
	2,934,050	149
Boats, etc.....	450,000	or gals. 5,364
Total	3,384,050	gals. 5,364

Proportion of cod	3,304,526
" haddock.....	50,760
" hake.....	25,380
" pollock.....	3,384
Total.....	3,384,050

LUNENBURG.

Reporter : Mr. W. A. Zwicker.

Cod were reported plentiful on May 5, and good hauls were made daily up to June 3. From this date to the 27th, the fishing was fair after which the fishery became good and continued so until to July 10. From then to the 28th, fair fishing was again reported, and from the 31st, to August 14, good results were obtained. For the following two weeks, owing to the scarcity of bait and the troublesome dogfish, the fishery was poor, but from the 30th, to September 22, fair catches were reported. During the next five days, the fish were scarce, but again appeared plentiful on the 29th, and remained so up to the middle of October with few exceptions when the weather was stormy. The catch is considered an average one. The Labrador catch was a very poor one but the Shore Soundings, Sable Island, Western and Grand banks were reported good and North Bay, Middle and Queero banks very good.

Dogfish were very plentiful on our shores this season and bankers report them the same on the Middle and Quero Banks.

Haddock were first reported on June 4, the catches were good up to the 27th, but from this date to the end of the season the catch was fair, and is considered above the average.

Herring.—the first bank herring were taken on May 22, when two boats averaged 5 brls., and up to 27th, the catch was reported very good. On the 28th and 29th, good catches were made and from June 8 to 25. From this date to July 7, the fishing

was very good and traps were averaging from 40 brls. to 200 brls. of fish. Fair fishing was reported from July 25, to August 14, and poor from this date to September 7, when there was an improvement in the fishing and to the 22nd, the catch was good, afterwards becoming scarce for the remainder of the season. The total catch is below the average.

Goods stops were made on July 17, 18 and 19.

Lobster fishing commenced December 15, 1899, and was reported fair until January 31, but the February and March catches were poor. During these months the total catch was exported alive to the United States. From April 1, to May 3, good catches were made and fair from May 5, to the 31st, or the close of the season. About 25 per cent of the large ones of the April and May catch were also shipped alive to the United States, the remainder of the larger and all the smaller ones were sold to the local packers. The catch for the season was an average one, and as prices were higher than usual, the fishermen were better remunerated than in 1899.

Mackerel.—The first mackerel were taken in nets on May 18, and very little was done until the 25th, when good catches were made for the next three days. From the 29th, to June 23, fair fishing was reported with traps averaging 40 and 50 brls. From the 23rd, to July 3, the fish were plentiful and traps varied from 15 to 100 brls. The fishery was fair from the 3rd to 6th. On the 7th, they again appeared plentiful and continued so for two days. From the 10th to 14th, the catches were fair and remained so, owing to prevalence of dogfish until the 25th, when one boat averaged 60 large mackerel. 70 brls. were trapped on the 31st, and during the early part of August from 30 to 55 brls. were taken in traps. On the 29th, 250 fish were reported in traps and on September 14, 50 were taken in nets. From October 15, to November 15, the catch was fair, making the total catch for the season the best at this station for a good many years.

Squid were scarce in shore all this season but the bankers report a fair supply on the banks from July 10 to the close of the season.

LUNENBURG BANKING FLEET.

	Lbs.		Lbs.
Atlanta.....	460,000	Kandahar.....	410,000
Ahava.....	440,000	Robert F. Mason.....	250,000
Lillie B. Hirtle.....	510,000	Tyler.....	255,000
Aleaca.....	420,000	Clara E. Mason.....	200,000
Ellen L. Maxner.....	320,000	Strathcona	320,000
Blenheim.....	400,000	O. P. Silver.....	300,000
Basil M. Geldert.....	390,000	J. A. Silver.....	260,000
Panama	430,000	Wisteria.....	310,000
Maggie M. W.....	425,000	J. M. Young.....	270,000
Columbia.....	390,000	B. L. Anderson.....	300,000
Gladys B. Smith.....	620,000	Beatrice L. Corkum.....	410,000
Kuvera	360,000	Luetta.....	456,000
Nonpariel.....	400,000	Hilda C. Corkum. . .	460,000
Acalia.....	50,000	J. H. Ernest.....	240,000
St. Clair Geldert.....	290,000	Harry Smith.....	200,000
Bonanza.....	310,000	Milo.....	320,000
Gleaner.....	260,000	Muriel.....	400,000
LaFrance	320,000	Dictator.....	260,000
Huron.....	310,000	Shamrock.....	320,000
Secret.....	360,000	Clarence Smith. . .	300,000
Bona Fides.....	260,000	Viking	420,000
Renown.....	310,000	Ontario	360,000
Werra	360,000	Frances Williard.....	270,000
St. Helena.....	240,000	Minto.....	380,000
Edward Roy.....	260,000	Baden Powell... ..	280,000
Urania.....	300,000	Mascot.....	350,000
Erminie	280,000	Lilla D. Young.....	450,000
New Era.....	380,000	Lena Oxner.....	380,000
Arbitrator.....	160,000	Arcana... ..	320,000
Britannia	190,000	Torato.....	280,000
L. E. Young.....	260,000		

SESSIONAL PAPER No. 22

LUNENBURG BANKERS.—(TRAWLERS), LAHAVE.

	Lbs.		Lbs.
Majestic.....	410,000	Merl M. Parks.....	395,000
Harold J. Pasks.....	540,000	Protector.....	375,000
Pavis.....	356,000	Comrade.....	336,000
Grace.....	440,000	Reliance.....	320,000
Roma.....	340,000	Alberta.....	360,000
Guardian.....	335,000	Talmouth.....	310,000
Millie Mace.....	350,000	Alaska.....	290,000
Athlon.....	380,000	Iona.....	395,000
Karino.....	370,000	Carlraine.....	426,000
Leopold.....	340,000	Alma Nelson.....	500,000
Victoria.....	252,000	Minnie S. Heckman.....	340,000
Carrie.....	320,000	Beluga.....	220,000
Puritan.....	260,000	Flora W. Sperry.....	280,000
Mindoro.....	270,000	Lillian.....	395,000
Ungara.....	402,000	Klondike.....	362,000
Loraine C.....	240,000	Punia.....	190,000
Enterprise.....	245,000	Cayuga.....	340,000
Companion.....	420,000	Mary Myrer.....	460,000
Calla Lilly.....	185,000	Willie C.....	260,000
Harry Lewis.....	300,000	D. M. Owen.....	300,000
Yosemite.....	418,000	Perfect.....	180,000
St. Vincent.....	200,000	Annie G. Hall.....	175,000
Glondon.....	430,000	Madeira.....	370,000
Barcelona.....	370,000	L. B. Currie.....	330,000
Premier.....	300,000	Avis.....	350,000
Collector.....	450,000	Citizen.....	445,000
Uruguay.....	540,000	Monitor.....	300,000
Jennie Myrtle.....	500,000	Emulator.....	430,000

LAHAVE NORTH BAY FLEET.

	Lbs.		Lbs.
Minnie B.....	60,000	Algoma.....	170,000
Nightingale.....	200,000	Mischief.....	160,000
Carrie B.....	190,000	Fern.....	180,000
Britannia.....	170,000	Cambrian.....	160,000
Rowena.....	140,000		

LABRADOR MEN.

	Lbs.		Lbs.
Garland.....	40,000	Valiant.....	40,000
Garnet.....	30,000	Mazie.....	25,000
Grenada.....	35,000		

MAHONE BAY BANKING FLEET

	Lbs.		Lbs.
Hattie L. M.....	430,000	Kimberly.....	300,000
Vernie May.....	400,000	Mildred.....	320,000
J. W. Mills.....	450,000	Elva M.....	150,000
Hazel B. Mosher.....	320,000	Delta M.....	150,000
Roe.....	270,000	Snow Queen.....	130,000
Lawrence.....	200,000	Daisy Linden.....	415,000
Unique.....	340,000	Blanch A. Colp.....	300,000
C. U. Mader.....	280,000	Energy.....	360,000
Flo. F. Mader.....	360,000		

LUNENBURG NORTH BAY FLEET.

	Lbs.		Lbs.
Maggie M. Z.....	220,000	Minnie M. Cook.....	380,000

LUNENBURG LABRADOR FLEET.

	Lbs.		Lbs.
G. A. Smith.....	60,000	Jennie May.....	120,000

64 VICTORIA, A. 1901

MAHONE BAY, LABRADOR.

	Lbs.		Lbs.
Irene, M. B.....	40,000	D. A. Mader	220,000
C. A. Chisholm.....	10,000	C. A. Ernest ¹	16,000
Monarch.....	60,000	Senovar	16,500
Nova Zembla.....	16,000		

MUSQUODOBOIT HARBOUR.

Reporter : Mr. George Rowlings.

Alewives were only reported twice during the month. First on May 21, in good quantities, and again on the 25th, when the catches were fair. This fishery has been poor for the last three years, and our reporter says: 'That such places as Chezzitcook river, Petpiswick river and Lake Porter, where there are no dams or obstructions, thus affording a free and open passage, they appear to have forsaken and Ship harbour is the only place where caught with few exceptions.

Cod were not reported until June 1, and then in fair quantities which continued throughout the month. They were taken in fair catches on July 6, and were not reported again owing to rough heavy seas until the 18th, when good and fair catches were made to the end of the month and throughout August. The fishing was poor for remainder of the season.

Haddock were first reported on May 15, in fair quantities and the catches were similiar to cod throughout the season.

Halibut were reported on August 3, and September 10.

Herring first struck in on June 26, in fair numbers and were not seen again until July 3 when fair catches were made. They were again reported fair on of August 13 and 27, but were very scarce until October 11, when a few were taken. The catch is considered a little better than last year's.

Lobsters were reported on May 9, in fair quantities but the fishing was greatly retarded by rough weather throughout the season. On May 21 many lobster traps were destroyed by the heavy seas. The season's catch will compare favourably with last year's.

Mackerel were first reported June 29, when boats averaged 8 and 10 doz. fish. They were taken in fair catches the first and last week in June and also on August 3, when some boats reported 100 fish. During the remainder of the season they were taken in irregular intervals. This fishery showed an improvement over the last catch, but has not been as good as in former years. One reason given is that the fish may pass along the coast either inside or outside off the range of the nets, and only a few may be caught.

Salmon were reported fair on June 16 and 18, and good on July 2. They were again fair on July 27, but scarce to the close of the season. The season's catch was very much better than last year's.

Trout were more plentiful this season than last.

PORT LA TOUR.

Reporter : Mr. J. W. Taylor.

Alewives.—About 60 were reported in nets on May 21.

Cod season opened up on or about May 8 with catches averaging from one-quarter to three-quarter quintals per man to the close of the month. During June bait was very scarce in shore, but both fish and bait were reported plentiful on the 14th. 15 miles off Cape Negro when $\frac{1}{2}$ quintal was taken per man. Strong easterly winds prevented boats from obtaining both branches which struck in plentifully, and everything continued dull until July 12 and the following week when fair reports were received. Bait was again difficult to secure owing probably to the troublesome dogfish which now put in appearance and from this to the remainder of the season very light catches were made. The total season's catch is estimated at 1,000 quintals or 50 per cent below that of last year.

SESSIONAL PAPER No. 22

Haddock were reported only the first week in July in fair quantities, and the catch is 50 per cent lower than last season.

Halibut were reported on October 8.

Herring.—The first report received of this fishery was on July 23, when herring of a small size were reported schooling in this harbour. They were taken on August 10 and 14 in fair catches when boats averaged three-quarter quintal per two men. The off-shore shallows were reported doing very well but inshore dogfish were very destructive to the nets. On September 22 and few days later the boats averaged 5 or 6 barrels of fish, but very few were taken during the remainder of the season. The season's catch is probably about 300 barrels of small size fish salted for lobster bait, and 100 barrels of large fish for exportation.

Lobsters were very scarce during May and averaged one fish to 2 traps and one-quarter large. This continued throughout the season and the catch is considered a scant average. The prices obtained were very satisfactory and the change of the close season our reporter says: "is considered very beneficial to lobster fishing."

Mackerel were reported fair on the 26th of June, but on the 23rd, 500 were reported in nets at West Baccaro, and very light catches were made for the balance of the season.

Pollock.—The catch is below that of the last season, and will not exceed 200 quintals.

Squid were very scarce this season and greatly retarded fishing. On the 14th, of June and August 6, bait were reported fairly plentiful on off-shore grounds and when not obtainable clams were utilized instead.

The American sch. *Henry M. Stanley* arrived (in for shelter) on June 5, with 200 barrels large mackerel bound for Gloucester.

PORT MULGRAVE.

Reporter : Mr. David Murray :

Cod were very scarce at this station the past season.

Herring.—The usual spring run of fish was reported very good at Harbour-au-Bouche for the month of May, but very scarce at neighbouring districts. No fall catch reported.

Lobsters were reported good during the season, with prices accordingly.

Mackerel.—The catches of this fish in the spring were reported good but that of the summer and fall a complete failure. The prices of No. 3 mackerel were low, and many barrels remained unsold.

Squid appeared the early part of the fall very plentifully, a considerable portion was frozen and is now being disposed of as bait at Arichat and Canso and some were exported to United States.

The inshore fishery has been a total failure for the last two years, and some boats did not secure even a single mackerel.

After the operations of the spring fishing shall have ceased, many of our young men hire themselves to Gloucester where there are good demands for experienced fishermen. Several who went from here early in the season averaged from \$630 to \$1,500 for extra season's labour.

PORT MALCOLM.

Reporter : Mr. R. G. Proctor :

Alewives were taken in light quantities from May 24 to June 10.

Cod.—During the past season, this fishery has been poor, and consequently no reports have been received.

Herring struck in on June 10, and were taken in fairly good catches during the season, up to September 25.

Lobsters and Mackerel were reported very scarce this season, and as a result fishing operations were suspended in both branches.

About 53 vessels, one american, baited here this season, and 1,060 bbls. of bait were disposed of at \$4 per bbl. yielding \$4,240. A very small quantity of fish was salted, as nearly all the fish caught were sold for bait.

EAST PUBNICO.

Reporter : Mr. J. A. D'Entremont :

Cod.—First appeared on May 25, with poor catches which continued until June 16, when good and fair hauls were made which lasted throughout the season. On the whole the season's catch has been considered an average one as the following results will show :—

Schooner "Civilian"	3,000 quintals.
" "Hazel Glen"	2,000 "
" "Uncle Sam"	1,800 "
" "Souvenir"	1,300 "
" "Aurore"	1,500 "
	<hr/>
	9,600

Haddock was taken in fair quantities during July.

Herring.—The only report this season, was on July 28, when the fish struck off Murder Island.

Lobsters.—The season opened on May 2, with very good catches which only lasted for a short period, afterwards they were poor for the remainder of the season. The catch is considered a poor one.

Mackerel were first taken on May 22, in light quantities, which continued for a few weeks, afterwards becoming very scarce, although large schools were reported off-shore, none came in the harbour.

This branch of the fishery is considered a failure this season.

QUEENSPORT.

Reporter : Mr. W. P. Scott :

Cod when reported during the season were taken in fair quantities.

Herring were reported fair in July. Nothing afterwards.

Lobsters, fair catches were reported on May 2, but for the remainder of the month from good to poor quantities were taken.

Mackerel, a few were taken on May 30, and fair on July 24. On this date they were reported schooling off this station.

Squid first made its appearance on July 6, but were reported in traps on the 20th of same month.

SALMON RIVER.

Reporter : Mr. Thomas O'Leary.

Cod were not reported until July 16, when the catches were good, and on the 20th fair hauls were made. The following day, the 21st, cod were reported plentiful at Sober Island. During the remainder of the season from good to fair fishing was reported.

Haddock, when reported on August 29 were taken in fair quantities.

Halibut were reported good at Sober Island on July 21.

Herring were first reported on August 15, when good catches in nets were taken at Sober Island and were scarce afterwards until September 22, when nets averaged two brls. A few were reported in nets on September 29.

SESSIONAL PAPER No. 22

Lobster.—This is the only branch of the fishing industry that is prosecuted to any extent at this station and during the past season the operations of this fishery were greatly interrupted by bad weather. On May 1, the fishing was fair and three days later, the 4th, very good reports, were received which varied from this to poor to the end of the month. They were taken in June and to the close of the season in catches varying from fair to poor.

Mackerel were only reported on August 24, when the fishing was fair.

SAND POINT.

Reporter: Mr. R. A. Bolman:

Cod were in fair supply from June 1 to September 30, inclusive. About July 21 the fish were reported plentiful 10 to 15 miles off shore and continued so for a fortnight, when bait became scarce and consequently fishing poor, attributed to the ravages of the troublesome dogfish. On August 27 bait was obtainable and all branches of fishing varied from fair to good until September 26. Bad easterly weather drove the bait off shore and as a result all fish were scarce. On the whole the catches per small boats were light owing to the scarcity of bait and will not exceed 15 quintals per man. Off-shore shallops 800 quintals.

The Bank Queero fleet made fairly good catches with hand lines and salt clam bait. The fleet composed of five sails, each landed half fares on their first trip, in the second they reported full fares. Total catch 10,000 quintals, with 106 men.

Alewives were taken in light quantities from May 1 to June 15, and were used fresh for bait per off-shore shallops.

Haddock, light and regular catches were made throughout the season, and the total catch per small boats is estimated at 200 quintals. Shallops 100 quintals.

Halibut was taken in fair quantities close inshore.

Herring were very scarce the early part of the season up to August 22, when a school of large size fish struck inshore and the catch was far from fair to good up to September 26. Easterly wether then set in and the fish disappeared for the balance of the season. Total catch 1,400 barrels, of which 200 were used fresh for bait, 100 salted for lobster bait and the balance salted for market.

Lobster, fishing commenced on January 1, from that date until the middle of March the catch was fair, when bad weather destroyed the traps and nothing was done up to the middle of April. From then until the close of the season the catch was fair. The lobsters averaged two-thirds large and all $10\frac{1}{2}$ fish were shipped in crates to Boston during the season. Those below $10\frac{1}{2}$ were forwarded to New York in barrels up to April 1. From said date the smaller ones were sold to Lockeport factory. The catch was below that of last season, but, as prices were 50 per cent higher, the results were very profitable for the fishermen.

Mackerel.—The fishing for the past season has been almost a complete failure, there having been but about 20 barrels taken. 14 barrels No. 2 large salted for market. 6 barrels of same quality fresh locally consumed.

Salmon were reported in light catches this season.

SPRY BAY.

Reporter: Mr. Jas. E. Conrad:

Cod were first reported in fair quantities on June 3, from which date until June 9, the catches were poor. Afterwards there was an improvement in this fishery and good catches were made during the month. For the remainder of the season light catches were reported. The season's catch is just one half of last year's as the estimate is 250 quintals.

Haddock were very scarce throughout the season, and the catch will not exceed 50 barrels.

64 VICTORIA, A. 1901

Herring were reported to have struck in on June 2, when for about one week good hauls were made but nothing of any importance was reported until September 14, when they appeared plentiful, and varied from that to scarce for the remainder of the season. Total catch of the season 800 barrels.

Lobster fishing commenced May 2, and varied from good to fair during the balance of the month. Very poor catches were reported to the close of the season.

Mackerel were first taken on May 28, but the catches have been very light throughout the season. Schools were reported near this station on June 20, and again off Tangier on August 6. The catch is estimated at 10 barrels.

Pollock, about 20 quintals were taken during the season.

Dogfish have been very plentiful and troublesome this season, and our reporter writes as follows:—"I think the government could do nothing better for the fishermen then by giving them a bounty of say 25 cents per hundred for dogfish. By this means they would become scarce, thereby allowing other fish that are more useful to be caught, and further adds, he is of the opinion that seining on our shores has a great deal to do with making mackerel scarce.

WHITEHEAD.

Reporter : Mr. J. E. Dillon :

Alewives struck in about May 5, and fair quantities were taken throughout the season. Total catch about 200 barrels.

Cod was not reported until June 9, owing partly to the unsettled weather. From June 16 to August 24 the catches were very light, especially in July when dogfish put in an appearance and bait was hard to obtain. From this date (August 24) to September 11, fair quantities were taken and during the early part of October fair and regular catches were made. Season's catch 3,000 quintals.

Haddock appeared May 26, in good quantities and continued so until June 5. Catch estimated at 1,500 quintals.

Herring was reported on May 5. The fish was scarce during the latter part of the month, but between the 18th and 25th of June some good catches were reported. Fair quantities were taken the first week in July. Dogfish struck off here again on July 10, and all branches were dull from July 10 to August 13. A week later good hauls were reported. Total catch of season estimated at 4,000 barrels.

Halibut was not reported, but the total catch is estimated at 2,000 lbs.

Lobsters were fair May 5, and were taken in light catches until the close of the season. Season's pack 3,000 cases, an increase of 1,000 cases over last year.

Mackerel were first taken May 26, in large quantities. 3,000 were reported in one trap on the 28th. During the early part of June the catches were poor, but from the 20th to July 4, some boats averaged from 100 to 600 per boat. Season's catch 1,500 barrels.

Pollock were reported plentiful June 2, and 40 quintals were taken on the 4th in traps. Some good catches were reported during the season. Catch estimated at 1,000 quintals.

Salmon.—Although not regularly reported, the catch is estimated at 4,000 lbs.

Squid was difficult to procure the early part of the season but were reported plentiful in the month of October.

Nearly all the fishing boats were damaged or destroyed in the hurricane of October 11.

WOOD'S HARBOUR.

Reporter : Mr. W. Luther Crowell.

Cod.—This branch of the fishing industry was dull this season owing to the scarcity of bait.

Herring struck in on September 1, and very small catches were made up to the 15th after which none were caught.

SESSIONAL PAPER No. 22

Mackerel were first taken in traps on May 15, and only a few were reported up to June 1. Total catch below an average.

Lobsters were taken in fair quantities from December 15, 1899 to February 1, 1900 and from March 1 to May 15, afterwards were scarce, making the season catch an average one.

YARMOUTH.

Reporter : Mr. F. L. Hatfield.

Alewives were taken on May 1 in fair quantities, and fairly good catches were made during the month. The total catch is reported better than last year's.

Cod appeared in fair quantities on May 12, and the average catch for the balance of the month and also in June, was reported fair. During July the troublesome dogfish was plentiful, and all branches of fishing were dull until the 13th, when codfishing was fair. They were also taken in fair hauls on the 17th and 30th. Fair reports were received on August 6 and 8, and poor afterwards until September 10 when a few were taken. The local boat fishing was not as good as last year's, and the total catch is considered not up to the average.

Haddock were reported on May 18 in fair quantities, and throughout the season were taken in similar catches to cod.

Halibut.—Fair catches were reported from May 1 to 25, and also on 7 and 8 June. Very little was done in this fishery for the remainder of the season.

Herring were first reported on May 15, when a few were taken in nets. They were very scarce until June 19, when one trap reported 12 bbls. of small herring. On the 28th, 100 small fish were taken in traps at Murder Island. Dogfish now put in an appearance and everything was dull until July 30, when heavy schools of medium and small herring were reported on shore. The fishery improved somewhat in August, and on the 2nd herring of a large size were reported plentiful and again on the 20th. A few were taken on September 10, but scarce afterwards.

Lobsters.—Fair catches were made on May 2, and high winds prevented further fishing until the 10th, when fair reports were again received and continued so up to the 31st. On this date they were reported plentiful, and good catches were made. There were 19 factories large and small engaged in this fishery this season, and the total output is estimated at 20,000 cases. The catch is considered about the same as last year's.

Mackerel were first taken this year in Yarmouth bar trap on May 14, and on the 16th, 79 barrels were trapped at Cranberry Head. On the 23rd, four traps had 80 barrels fish and seven traps reported 325 ice barrels on the 25th. During the remainder of the month and also in June good reports were received from the traps. On June 2 the traps were damaged considerably by heavy seas. Mackerel were scarce afterwards up to August 8, when 1,000 medium were taken in nets. The catch was not up to the average of last year's.

Salmon were taken in fair quantities in May.

Shad were reported plentiful on May 12 and 14, but scarce after.

Smelts.—Fair quantities were taken on May 12 and 14.

Trout were taken in catches varying from very good to fair in May.

WEST ARICHAT.

Reporter : Mr. C. P. LeLacheur.

Alewives.—The catch of these fish is steadily declining each year; this season being the poorest ever known.

Cod.—Codfish struck in about June 1, and light catches were made daily during the month. In July and August the catches varied from light to fair, but through the remainder of the season was poor. During the first part of June and again in September, scarcity of bait prevented successful fishing. The total catch this season is estimated to be the smallest in many years.

Herring were first taken about June 20, and light catches were made on the in-shore grounds for a few nights. From the middle of July to August 15 fair to good catches were made off shore. The fishing, however, was variable and the total catch is considerable below the average. The price ruled higher this season than last, and this to a certain extent will make up for the shortage of catch. The fish were of a fine quality and no difficulty was experienced in curing those taken in August, as was the case in former years.

Haddock.—Light catches of haddock were made in June and July, but through the remainder of the season the fishing was poor. These fish are not taken now in as large quantities as was the case some years ago and a marked decline was noticeable in this summer's catch compared with last. Late fall and winter trawlers, however, have often reported good haddock fishing in this bay.

Lobsters were taken first here on April 14, and fair catches were made daily until the end of the month, when they commenced falling off and continued to decline from day to day until June 16, when the fishing stopped. The total catch at this station is estimated one-third better than last year's, and as prices were good throughout the season our fishermen were well remunerated for their hard labour.

The weather this season was favourable for fishing, no drift ice interfered with the work, and although sometimes rough, no time was lost through bad weather. Our fishermen moved their gear into deeper water this season, where, with a reduced number of traps, better results were obtained. The greater part of the lobsters taken here were canned, though several shipments of live lobsters were made to the United States.

Mackerel.—Made their appearance about the latter part of May but very few were taken until the last of June, when a small catch of medium sized fish was made. Light catches were occasionally made during the first week of July, but the total catch was very light scarcely exceeding one hundred barrels.

On the whole the fishing at this station has been poor this season. There is a shortage in the catch of cod, haddock and herring, lobsters only having shown an increase. Our fishermen contend, that, had they means of procuring a steady supply of bait, a far better result might be had in the catch of cod and haddock.

ARICHAT.

Reporter : Mr. J. T. Jean.

Cod.—Few cod were taken the earlier part of the season but the first report of any importance was received on August 3, when the catches were fair. They were again reported fair on the 14th and 18th, and were poor afterwards until September 2, when bait was poor amid a season's plenty. In October fair fishing was reported and several good hauls were made.

Haddock were first reported on May 25, and were taken in quantities varying from fair to poor until October 9, when they were reported plentiful. The spring run of haddock our reporter says, was very late, and the catch small, and further adds, that the chief advantage of an early run of haddock is that the heads are used by the fishermen for lobster bait, when the latter is scarce.

Hake were only reported on June 2, and then in good catches.

Herring struck in on June 18, in fair quantities, but the catch has been very poor throughout the season.

Mackerel were reported fair from June 21 to 27, and again on July 10 and 11, but the catches of both herring and mackerel are considered the poorest for a number of years.

Lobsters. Fair catches were made during the month of May, but were scarce afterwards to the close of the season. The catch is considered a fair one but as prices were high a large number of fishermen realized fair proceeds.

SESSIONAL PAPER No. 22

CHETICAMP.

Reporter. Mr. Chas. E. Aucoin.

This fishing district is composed of the five following stations viz. Cheticamp proper, Cheticamp island, Pleasant bay, Cape rouge and Grand Etang. The two first named stations have gone pretty much hand in hand throughout the season—the fluctuations in quality and quantity of the one corresponded greatly with those of the other. In the descending order of magnitude the station of Cape Rouge has been placed last, a somewhat remarkable thing, as that station had always excelled any of the others in the mackerel fishery. One new boat was registered this year, making the total number now at twenty-two. The majority of those boats belongs to the fishermen themselves, the rest are owned by the merchants.

Cod were not reported until May 29 owing to the large quantities of ice which remained on shore during the early part of the season. A few fish, however, were taken in nets on the 14th and the average catch in June and July varied from good to poor. In August the catches alternated from fair to poor to the 17th, when there was a lull and nothing was done until the 25th. On this date and for the next four days the fishing was fair afterward becoming very good on the 31st. Fair catches were reported on September 5, 6 and 27, but poor for the remainder of the season.

Haddock were reported fair on May 26 and were taken in similiar catches in June. The July and August catch varied from good to fair and on September 5 and 6 fair reports were also received.

Hake.—Fair reports were received on May 29 and again in June and July but nothing afterwards. Cod, hake and haddock have shown better in quality than in quantity and there is no doubt that a highly exceptional school of them has this year struck our portion of the Gulf.

Herring as usual struck in early about May 9, but in small quantities. A few were taken in nets, but the greater part which was used by the fishermen for bait purposes was obtained from the Magdalen Islands where it is teeming a large portion of the spring. Of the herring which frequent our coast, it may be said that the spring species is very lean and is almost wholly unfit for domestic use; whereas, the fall one is a short, thick, fat herring, very tasteful, a palatable dish which would grace the tables of many a stately dining-room. This sort of herring will enter bays and inlets for the purpose of depositing their spawn. Generally, a fair quantity is captured.

Halibut were reported in fair quantities on August 4, and is now looked upon as a fish of the past. Still, a revival in the catch of this fish has been shown at Cheticamp Point this year, when a few were got varying from thirty to one hundred pounds in weight.

Lobsters were plentiful on May 9, and were taken catches varying from good to fair up to 20, when they were scarce for the remainder of the month. The traps were considerably damaged by N.W., gales on or about the 19th. During June the catches were light until the close of the season. The impediment to the success of this fishery has been the usual gales of April and May incurring heavy losses to the fishermen in damages to lobster traps. It seems that the quality of lobster is much more inferior now than it was ten or twelve years ago. The quantity also seems to have greatly diminished. This is attributed, no doubt, to the ravages done to seed lobsters, for it is very certain that every year sees the destruction of hundreds of these crustaceans.

Mackerel.—First appeared on June 2, when from 10 to 40 were caught. They were reported fair on the 5th, and varied from this to poor during the month, excepting the 13th, when they were plentiful. Mackerel were again plentiful on July 23, and fair on August 9, when one boat captured 200 fish. Good reports were received from the Island on the 30th, but this fishery was poor afterwards until October 15, when fair quantities were taken. Mackerel has a poor record, probably the poorest in the history of the fisheries. It struck the shore in numerous shoals, but merely on a flying visit, giving the watchful fishermen an opportunity to

64 VICTORIA, A. 1901

catch a few barrels. Everything tends to show that this fish will ere long forsake our shores. Since a few years, its play on the coast has been very singular, and to all appearances, it does instinctively seek a greater suitability in well provided grounds.

Salmon appeared in fair quantities from June 21 to 25 inclusive and were scarce afterwards until the 30th, when they were reported very plentiful in Little River, with pools pretty full. The catch in July varied from good to poor and they reported fair on August 4, but poor for the remainder of the season. Salmon has paid fairly well but better with the nets set at ocean than with those in Little River. Owing no doubt to the enforcement of existing regulations by the Fishery Overseer and guardians, the salmon netter has been very much harassed. The pools have been full a large part of the summer, and left quite undisturbed. Nothing outside of what was casual has hindered the retreating salmon from perfecting their spawn.

Squid were first taken on July 21, in fair quantities and the catch varied from very good to poor throughout the season. This fish is quite indispensable to codfishing and a great boon to fishermen. It is a singular fact that after a moderate breeze or even the slightest disturbance of the waters, it will sink, and not to reappear again on the surface for some time. It has also been said that rain was very effectual in causing squid to vanish, and that the fishermen were almost sure to be handicapped on the day following a rainy night. The question of erecting a bait freezer at Cheticamp proper has been brought up this summer but without any final result.

Trout were reported very plentiful on June 7.

Dogfish appeared on the coast this season about August 4, and doubtless has caused great havoc and depredation among all kinds of fish. It would be considered a wise course for the Government to make provisions for the entire annihilation of this fish, as in all probability it will in a very short time reign supreme.

Smelts.—Our reporter calls the attention of the Fishery Bureau, to a better protection service in the smelt fishery and says:—"I am fully aware that millions of these make their way up the Cheticamp River in the early spring and a great portion of them are totally destroyed. I have been a witness to thousands of these tiny fishes spread about on both banks of the river with their yellow spawn most pitifully withering in the sun.

DESCOUSSE.

Reporter: Mr. R. F. Burke:

Cod.—The inshore cod fishery was very poor this season, and was not reported until July 27, when fair catches were made. The smaller boats catch totalled 40 quintals, but the offshore fisheries were more vigorously prosecuted by the usual 5 sails, from this station, and their season's catch is estimated at 2,200 quintals.

Hake.—The only catch reported during the season, was on May 30, when fair catches were made.

Herring struck in on the 16 and 26 of June in fair quantities. Nothing was afterwards reported until September 3, when for the following five days good catches were made. The catch, however, is considered a failure, not over 50 barrels taken the whole season.

Lobsters were taken in good quantities on May 2, and fair catches were reported for the balance of the month, which continued until the 15 of June, afterwards becoming scarce to the close of the season. The fishery this season is in advance of last year's, both in regards to quantity and quality of the fish. Season's catch about 1,500 lbs.

Mackerel were first reported in nets on May 30. During June some netters averaged from 40 to 200 fish. They were again reported fair on July 27, and also on September 6, when few were taken in nets and by hooks. Although mackerel remained in the bay longer than any previous year, the catch is reported as an exceedingly small one, and 7 barrels will represent the inshore fishery for this season. 50 barrels were taken offshore by the five vessels fishing out of this station this season.

SESSIONAL PAPER No. 22

GABARUS.

Reporter: Mr. R. McLean:

Caplin.—Very few were reported during the season.

Cod were caught on May 26, in light quantities until the 8 of June when they were first reported fair, with boats averaging from 2 to 4½ quintals, after which the fishery steadily improved and from the 12 to the remainder of the season codfish was very plentiful and some good catches were made. The fishery, at times, was greatly handicapped by the scarcity of bait and also by unfavorable weather. The fall fishing is considered a failure as stormy weather, gales of wind, and rain have continued since September. One whale boat was wrecked on the 19 of September. Had favorable weather prevailed, good hauls would have been made, as report has it that cod were plentiful. It is reported on the 7 of November a few boats out of Foucher captured 7 quintals of cod. Season's catch 1,750 quintals.

Haddock were not reported, but 80 quintals were taken during the season.

Herring struck in fair quantities about June 26, when they gradually improved and on the 30. 800 and 500 were reported in nets. During July a fine run of large fish appeared in the bay and good catches varying from 700 to 2,200 were made in nets. To the close of the season fair catches were reported. Notwithstanding the unsettled weather throughout the season, the catch of 750 barrels is considered a good one and is 211 barrels in excess of last year's, which was the best catch reported at this station for the past 18 years.

Lobster fishing opened fair on May 8, and continued so for the next twelve days, when rough weather greatly interfered with the fishing for the balance of the month but to the close of the season fair and regular catches were reported. The catch for the season is considered a good one.

Mackerel.—About 30 fish were taken first in deep water on the 25 of May and continued light until the 31, when boats averaged from 200 to 1,900 fish. The early part of June several good hauls were reported, and catches ran as high as 1,000 mackerel. The season's catch of 280 barrels is considered a good one, and is 200 barrels more than last season.

Pollock about 20 quintals were taken during the season.

Squid appeared September 6, in the bay, but would not jig or land.

HAWKESBURY.

Reporter: Mr. J. C. Bourinot:

Alewives were reported very plentiful on June 22, but scarce afterwards to the close of the season.

Cod were only reported on June 4, when the fishing was good.

Herring struck in on June 18, plentifully, and on the 22nd very good catches were made. They were fair on the 25th, and scarce after until the September 11 when fair quantities were again taken. Herring were reported very plentiful on September 15, and poor for the balance of the season.

Lobsters were taken in fair quantities on May 2, and the season's catch varied from good to poor.

Mackerel were reported during June and July in catches varying from very good to fair. Nothing after for the remainder of the season.

INGONISH.

Reporter: Mr. J. M. Burke:

Cod, the fishing season opened during the first week of May when for about ten days the catch was very good but there being so few engaged at this branch only a small quantity was taken in comparison to others years. The fish were fairly plen-

64 VICTORIA, A. 1901

tiful during the remainder of May, also in June and July, and in fact throughout the season the catch per boat is far below the average.

Haddock were taken first about the middle of May and were in abundance for about ten days. The schools lasted three weeks and the few engaged at certain trawling grounds at this station reaped a great harvest, as there are only a few places where haddock can be caught and therefore those that get those berths first are the only ones to profit thereby.

Herring. The spring run struck in the first week of May in small quantities and were used entirely for bait for cod and lobster fishing. There were a few summer herring this season, but not enough were caught even for home consumption.

Lobsters were taken the first week of May and the second week saw all the factories in full operation. During the first six weeks the catch was a fair one, gradually decreasing towards the middle of July, when they became very scarce owing somewhat to a scarcity of codfish offal which is largely used for bait.

Mackerel visited this station between May 18 and 25, and were quite plentiful for about a fortnight. They were chiefly of a medium size, and boats got from five to fifteen barrels, according to their outfit of nets and attention paid to them. The spring catch of mackerel was the largest for a number of years. A few summer mackerel were taken in shore-fast nets in July and August. None were taken after September 1.

Salmon appeared the last week in May and the catch was small all through the season. Fair prices were obtained for both fresh and salted fish. The season's catch was far below the average.

Squid was reported between July 1 and 10, in fair quantities, but was very irregular throughout the entire season.

L'ARDOISE.

Reporter : Mr. John M. McIsaac.

Cod were not reported regularly, as this important fishery is not prosecuted to any extent and the catches were poor throughout the season.

Haddock appeared in fair quantities on May 28, and a few days later. Light catches were reported from June 4 to 9 and continued poor for the remainder of the season. The catch is considered a very poor one, in comparison with former years, as this fishery was the principal line one at this station.

Herring were very scarce in the past season, the boats getting scarcely sufficient for local use.

Lobsters were reported on May 9, and were taken in light and regular catches until June 23, afterwards becoming scarce to the close of the season. The catch is reported a fair one, but as prices obtained were higher, the results have been considered very good, if not better than in former years.

Mackerel first appeared May 29, fair in deep water and very scarce in shore. On June 4, light catches were also reported but nothing afterwards. Mackerel is getting scarcer each season but of a finer quality, and the catch this season is considered 25 per cent, both numerically and financially below that of last years.

LOUISBOURG.

Reporter : Mr. H. C. V. Lavatte.

Cod were taken on May 31, with boats averaging 1 quintal. The catch in June and July was on an average fair. They were again fair on August 9 and afterwards poor, owing to the scarcity of bait and the presence of dogfish until October 3, when boats averaged 2 quintals.

Haddock were reported on May 31, and were taken June in catches from good to fair. A few were reported on September 5.

SESSIONAL PAPER No. 22

Herring were taken in fair quantities during June and July. On June 6, boats averaged 100 fish and 2 brls. were taken on the 11th.

Mackerel were reported on May 26, when boats averaged 30 fish and on the 28th 2 brls. were caught. On June 7 and 12, they mixed with herring and 100 were taken per boat. Fair quantities were reported on June 23 and 29, and poor after until August 30, when a few were hooked. A small quantity were jigged on September 5.

Lobster fishing commenced May 12 with fair prospects and continued, so to the close of the season.

MABOU.

Reporter: Lewis McKeen.

Cod were reported about May 18, and were numerous up to the end of the month. After that period fresh bait become scarce and as the fishermen were chiefly engaged in prosecuting the lobster fishery, very little attention was paid to that branch of fishing industry.

Herring made their appearance first on May 5, and were plentiful till about the 19th, when they slacked off. The July catch was almost 'nil'. Owing to boisterous weather very few fall herring were netted.

Mackerel was first reported on June 25. During July they were very plentiful; large schools appearing frequently and were of large size, but as they would not take the hook the catches were light on account of not meshing well.

Lobsters were first reported on May 6, the first catch being packed on the 7th, which was some ten days later than in 1899. The catch was fair up to the 29th. During the remainder of the season the pack was somewhat below the average. The catch for this season was a little less than that of 1899, which was partly due to the fact that the season was some fifteen days shorter than usual.

Throughout July and up to August 17, fishing was poor, after that date line fishing improved and during the remainder of the month and part of September, cod and hake were plentiful. A large number of boats and nets were destroyed by the hurricane of September 13, and as dogfish had previously appeared on the fishing grounds, fishermen decided not to prosecute the fisheries any longer.

MARGAREE.

Reporter: Mr. M. A. Dunn.

Alewives struck along the coast early in May in very light catches, and whatever was caught during the latter part of the month.

Cod.—The first fishing reported was with trawls, on May 16, and the catches both with hand lines and trawls were light until about June 15, after which good hauls were made whenever the weather permitted and bait was obtainable. On the 25th, from 200 to 400 per boat were taken, and from this date to the end of the season the catch varied from good to poor. During the latter part of the season the destructive dogfish lessened the catch of this fishery as well as the other branches of the fishing industry considerably. The season's catch is considered, however, about an average one.

Haddock and Hake.—The former made its appearance about June 9, the latter on or about July 20. No large fares in these branches were reported, but the catches varied from fair to poor during the latter part of the season.

Herring first appeared about May 12, but in light quantities until about July 3. Good catches were made to the 18th, when from 50 to 100 were taken in nets. Fair fishing was reported from the 21st to 26th, and on the 27th, they were reported taking the hook freely at Margaree Island. During August and September, when circumstances were favourable the catches were good, but owing to stormy weather and the large quantities of dogfish around the coast, it was only seldom that nets

64 VICTORIA, A. 1901

could be kept in fishing order, and later in the season, the nets were not out at all. The fishermen report more herring this season than has been for some years.

Lobster fishing commenced about May 8, and continued good until June 1, afterwards gradually decreasing to the close of the season. During the best part of the lobster season, the weather was rough and as a result, the catch was small. On July 8, the lobster gear was out of working order on account of the past storms. It is reported that the quantity on the coast was as good as formerly, but the season's catch was somewhat smaller.

Salmon were first reported on June 6, and the catches were light to July 1. On this date good catches were made which continued up to the 20th. During the remainder of the season the catch gradually slackened off and is considered an average year's.

Mackerel were reported on June 27, and were light both in quality and quantity. Only a few were taken up to July 14, when a small catch of large fish were made. On the 23rd, from 50 to 200 were taken in nets and a little later large schools were reported on the coast, but would not take the hook. During August, from 100 to 200 were taken with jigs and from 100 to 300 per boat were reported. Nothing was done in this branch for the remainder of the season, and the catch has been almost a total failure.

Squid appeared on July 23, and were taken in quantities varying from good to poor for the balance of the season.

Trout were taken in fair quantities on May 19 and 21.

MEAT COVE.

Reporter: Mr. A. B. McDonald.

Cod.—This very important food product is not prosecuted here to any extent, as the fishermen cannot find a market to reward them for their labours, and only sufficient is taken for home consumption.

Herring were first reported on May 16 in fair quantities and continued so until the 23rd when they became scarce. Fair catches were made the first week in June, afterwards poor throughout the month. Towards the latter part of August they became more plentiful and good catches of a superior quality were reported.

Lobsters.—The fishing was a fair average and catches were very regular throughout the season. The weather was favourable, and the fish was fully up to size of former years.

Mackerel was a complete failure this season, only fair catches being made in July in nets. Several schools were noticed along the shore, but would not take the hook. This fish for some reason unknown is abandoning their haunts here each year and not more than 20 barrels were taken.

Dogfish were plentiful and very annoying this season, and a number have been taken for their oil.

PETIT-DE-GRAT.

Reporter: Mr. Peter T. Fougere.

Cod were reported about May 26, when 100 were taken per boat. The June catch was poor and the catches for the remainder of the season were fair whenever the weather was favourable. On September 29 arrived the schooner *Bonnie Glen* with 110 quintals, and *J. B. M.* with 80 quintals from North Bay.

Dogfish appeared in August and have been very troublesome and destructive for the balance of the season.

Haddock were first reported on trawls on or about May 19. On the 26th 100 per boat were taken, and the catch was very light for the remainder of the season.

Hake.—The inshore fishery was not reported, but the schooner *Vanguard* from North Bay reports one trap of this fish.

SESSIONAL PAPER No. 22

Herring were reported on July 28 in nets and on 11 August, 100 barrels were caught and sold for \$4.75 per barrel. Schooners *Iona* and *Baleka* arrived in port from Grand Banks with full fares on the same date and are seeking to sell. Two vessels from Magdalene Islands with 40 barrels and 70 barrels respectively arrived in on August 4, and on 22 September 150 barrels were captured.

Lobsters were reported on May 1 in fair quantities, and the catch to the last of May varied from good to poor. During the remainder of the season from fair to poor catches were reported. The prices averaged in May from \$3 to \$3.50 per cwt.

Mackerel were reported the first week in June and on the 16th two vessels from here arrived from Magdalene Islands, one with 50 barrels, the other with 65 barrels, and reported mackerel plentiful at the Islands and all vessels with full fares. One vessel arrived on August 11 with 14 barrels.

Salmon were reported June 5, and fair quantities were taken during the month and the first part of July.

Squid was late appearing here and greatly retarded fishing, fair catches were reported later in the season.

PORT HOOD.

Reporter : Mr. E. D. Tremaine.

Cod made their appearance on May 22, with fair prospects, which was a week later than last year. On the 30th inst. they were reported very good and from that date until June 7, fair catches were made when the fishing became poor up to July 14. For the next ten days fair fishing was again reported afterwards becoming poor, with few exceptions, for the remainder of the season owing to the scarcity of bait and to the voracious dogfish. The catch is considered below an average.

Haddock were reported plentiful on May 31, and were taken in fair quantities during the season, excepting the months on August and October when they were scarce. The catch is about an average one.

Hake did not appear until June 14, and the catches were poor until about July 9, when fair fishing was reported daily. During September the catch varied from good to fair and better results would have been obtained had not the unwelcomed dogfish put in an appearance.

Herring struck in on May 7, and from this date until June 3, were on an average fair, after which the fishing was poor for the balance of the month. Fair quantities were reported on July 5, and at intervals, during the remainder of the season. The fish caught during the summer and fall were large and of a good quality.

Lobster fishing commenced the last week in April and the catches were reported good until the latter part of June, when the fishing was poor and continued so to the close of the season. The catch this season, however, is considered a good one.

Mackerel were taken on July 18, and the next ten days in fair quantities. They were also reported fair on August 9 and 27. The catch is considered a poor one, not over 100 brls. taken the whole season.

Squid.—Fair catches were reported between July 26 and 28.

Dogfish.—Although not so plentiful as in former years were very destructive particularly in September, when the operations of the cod, haddock and hake fisheries were very much retarded.

ST. ANNS.

Reporter : Mr. Thos. D. Morrison.

Cod were very scarce the early part of the season and as far as reported the only catches made during the entire season were from June 9 to 26, when from good to poor hauls were obtained daily.

Herring.—On April 16, the harbour was clear of ice and light catches of herring were made until the 20th, when drift ice prevented fishing for six days. Herring, however, struck in very plentifully on May 1, and remained so for the next

64 VICTORIA, A. 1901

six or seven days, when good catches were made up to the 11th. From now until the 15th the fishing was fair. Excellent hauls were made to the 27th, and afterwards poor until July 3, when fair fishing was reported daily to the 11th. Nothing was done afterwards.

Haddock.—During the first week in June fair catches were reported daily, which continued to the 12th. Fishing was poor after in this branch.

Lobsters were reported fair on May 5, but from the 8th to 24th, good and regular catches were made each day. On the 26th and 28th fair reports were received, after which the fishing was poor until June, when fair quantities were taken. On May 28 the lobster traps were wrecked by storms which left the catch small.

Salmon were taken in fair quantities each day from June 16 to 23 but on the 25th were reported plentiful.

Squid were reported on June 12, three weeks earlier than usual, and were taken in catches throughout the season from very good to fair. Ten bankers baited here in May, and some reported fishing good on the banks.

ST. PETER'S.

Reporter : Mr. H. D. Urquhart.

Alewives.—When reported were scarce. About 5 brls. were taken this season.

Cod and Haddock.—Nothing was done here this season in these branches, but the Grand Bank fishermen all made good fares and reported cod plentiful off shore.

Herring struck in on May 10, when fair catches were made. They were not reported afterwards until July 17, when the run struck in large numbers and about 50 brls. will represent the total catch.

Lobsters.—This branch of the fishing industry opened between April 10 and 15. During May the catch varied from fair to poor, but improved somewhat in June, when regular catches were reported daily. There was a greater number engaged in lobster-fishing this season than any preceding year. The catch is considered an average one.

Mackerel first appeared May 25, and were of a smaller size than those of the year previous. They did not come in the bay, the catches being made off L'Ardoise. In the second run, 15 brls. were captured (No. 3). During August a few brls. of number two's were taken.

Salmon.—The catch this season was fair, about 30 brls. were taken.

PRINCE EDWARD ISLAND.

ALBERTON.

Reporter : Mr. J. P. Brennan.

Cod were first reported on May 25, and fair catches were made from that date, with few exceptions to July 5, after which the fishing was poor until August 3, when fair hauls were taken throughout the month. From September 10 to 22, the catches varied from good to fair. Very little was done afterwards, particularly in October, when the fishing operations in general were entirely suspended.

Haddock were taken in fair quantities on August 13 and 15, but poor after in this branch.

Hake were not reported until September 6, and then in fair quantities. From the 10th to 16th they were plentiful and good hauls were taken daily. On the 18th, they were reported in fair catches which continued up to the 22nd, but poor after.

Herring were first reported on May 2, when they struck in at North Cape, Tignish, and also this station. They appeared very plentiful on the 5th and for the next five days good catches were made. During the last two weeks of the month the catches varied from fair to poor and were scarce after for the remainder of the season.

SESSIONAL PAPER No. 22

Lobsters were taken in very good quantities on May 5, but the catches at this station were from good to poor to the close of the season. Very stormy weather prevented successful fishing this season.

Mackerel appeared 10 days earlier than last year, and were reported fair from May 19 to 24. They were reported in nets on July 3 and the catch for the balance of the month was fair and was again fair on August 6. Nothing was afterwards reported.

Bait was obtainable the greater part of the season at this station.

BLOOMFIELD OR MIMINEGASH.

Reporter: Mr. John Doyle.

Cod were not reported until June 5 and up to the 13th. were very plentiful and from now to the end of the month were taken in fair catches. From July 3 to 11, and 27th to 31st fair hauls were made. During August the catches varied from good to poor for the entire month. The fishing was fair on September 3 and 4, but nothing was reported after owing to the stormy weather, which suspended fishing operations for the remainder of the season.

Hake appeared in fair quantities on July 28, and remained so with few exceptions to September 4. Bad weather prevented a farther prosecution of this fishery.

Herring struck in fair quantities on May 8 and continued so to the 19th. On the 22nd they became quite plentiful and the catches until the 25th were good, after which they were scarce to the close of the season.

Lobsters were reported on May 8, three days earlier than last season and were taken in catches varying from fair to poor up to and including the 21st. They were scarce to the end of season, owing to the disagreeable weather which greatly impeded the fishing.

Mackerel were first taken on June 13, when a fair catch was reported in nets. They were scarce after until July 10, when they were reported taking the hook freely at West Point—a distance of about 20 miles west—Good catches were made from the 13th to the 17th and on the 27th, they were reported schooling on the coast. The first week in August saw the fish fair and on the 10th mackerel were plentiful but would not net or take the hook well.

The fall-fishing in general, this season, has been greatly retarded by the very disagreeable weather which has prevailed from the beginning of the second week in September to the remainder of the season.

GEORGETOWN.

Reporter: Mr. Chas. Owen.

Codfish struck in shore about May 26 and good catches of large fish were made up to June 15, when a small sized run of cod appeared plentifully to the 30th, and bait becoming scarce the fish moved off to the banks where fishing was reported good while bait could be procured.

Hake has been plentiful this season and a much larger quantity landed than in previous years. During the latter part of the season the weather was stormy and interfered very much with the fishing, the fishermen being obliged to leave their trawls and seek shelter. The amount of destruction and loss of nets and trawls by the severe hurricanes which swept this coast has been a serious drawback to the fishermen who have to bear the entire loss.

Herring fishing commenced about April 15 when only a few were caught daily. From April 20 to May 25 the catch improved and large quantities of lobsters were reported in the Bays and rivers, with good netting up to the end of the month. Bankers began to arrive seeking bait on April 9 and continued arriving up to May 31. Small fat herring were plentiful during the latter part of October, in the rivers and bays. The quantity secured for lobster and cod fisheries is estimated at about 5,000 barrels.

64 VICTORIA, A. 1901

Buildings are now being erected here for the curing and smoking herring industry, and it is hoped that during next season a profitable business will be conducted.

Lobsters were reported about May 1, from which date good to fair catches were made to the 22nd. On the 15th, traps averaged 3 and 4 barrels, and owing to a greater number of traps in use, the catch per trap was less. The catch is somewhat larger than for 1899, and the season's fishing has been profitable both for fisherman and packer.

Mackerel were first reported when they were seen schooling off Panmure Island on June 9. They were again reported similarly on the 18th. The fishing has been better this season than for some years past. The catch has not been large and netting was the chief means of capture. All attempts with hook and line proved a failure with the exception of an occasional spurt. A number of schools were observed between Pictou and Boughton Island and on several occasions it has been observed that schools of mackerel played close to nets and avoided them, or only a small number would be found meshed.

MALPEQUE.

Reporter: Mr. Jas. McNutt.

Cod appeared in fair quantities about May 25, and varied from fair to poor in the months of June, July and August. During the balance of the season the fishery was interrupted by windy weather, but the catch is considered a fair average one.

Herring appeared about May 1, in fair quantities, which continued so until the 10th, when they were plentiful and good catches were reported, the fishermen getting sufficient for bait and home consumption.

Lobster fishing commenced about May 10, and the catch was fair until June 5, afterwards becoming poor until the close of the season. On May 14, the catch averaged 100 per boat. The total season's catch was below that of last year's but the prices obtained were higher.

Mackerel.—This fishery was better in comparison to the last few years. They appeared quite plentiful during July and part of August, but scarce afterwards. The greater quantity of those taken in July was of a very inferior quality. Mr. McNutt says. 'I would suggest that the taking of mackerel in nets during the month of June be prohibited, for they are of a very poor quality and of little profit to any one, besides killing the spawned fish.'

NEW BRUNSWICK.

CARAQUET.

Reporter: Mrs. E. Blanchard.

Cod were taken in catches varying from good to fair throughout the season.

Herring.—A few were reported the early part of the season in nets but on May 9, from 5 to 10 bbls. were netted. They were not afterwards reported until August 2, when good stops were made.

Lobsters.—Fair quantities were taken on May 28 and June 19.

Mackerel were reported fair on July 3.

Clam bait was plentiful during the season.

ESCUMINAC.

Reporter: Mr. J. J. Keary.

Cod were reported in fair quantities from June 15 to 20. On the latter date they were reported plentiful and afterwards scarce until the 25th when good catches were again made.

SESSIONAL PAPER No. 22

Herring struck in plentifully on May 9, and were taken in catches varying from good to poor for the balance of the month. This fishery, like the other branches of the fishing industry, were not reported regularly, but the total catch for the season is considered a good one.

Halibut were reported very plentiful on May 14.

Lobsters were reported fair on May 8, and plentiful on the 12th. The catches varied from fair to poor for the remainder of the season. The season's catch is considered a poor one.

Salmon were taken in fair quantities on May 28, and during the balance of the season from good to fair catches were reported. The catch this season, was a good one.

Shad first put in an appearance on May 26, in fair quantities, but improved in June and were taken in catches from good to fair during the month. The catch this season was a poor one.

Mackerel first appeared on June 22, and the catches were fair until the 26th. About 1,800 fish were taken at this station this season and the catch is considered a poor one. A portion of the salmon and mackerel catch was exported fresh, and the remainder was frozen.

GRAND MANAN.

Reporter : Mr. Charles Dixon.

Cod appeared on May 12, when one small boat reported a catch of 2 quintals which was the first for the season. The first dispatch was received on the 17th, and reported cod very plentiful and continued from this to fair throughout the month, with boats averaging from 4 to 6 quintals a day on bulk head and hand lines 6 quintals. During the first week in June the fish were very plentiful, but fair for the balance of the month, and also throughout July, afterwards becoming scarce for the remainder of the season. The total catch is about the same as last year's, 500 quintals.

Haddock were also reported on May 17, and in very good catches which lasted to the end of the month. Throughout June and July the catches varied from very good to poor, and in August and September from fair to poor. During these two periods some good hauls were reported and the season's catch is estimated at 800 quintals or an excess of 300 quintals over last year's.

Hake were first reported on June 3, when 3 quintals were taken per boat. Light catches were made until July 3, when they appeared very plentiful and were taken in catches varying from very good to poor throughout the balance of the month and also in August. Some boats had from 2 to 6 quintals. During the early part of September from very good to fair catches were made, but nothing afterwards. Season's catch 3,500 quintals or a decrease of 500 quintals in comparison with last year's. 300 barrels fish oil were put up this season.

Halibut were reported on June 16.

Herring were reported on May 13 at Dark Harbour Pond, but of a very inferior quality. They did not appear again until July 23, when herring of a large size were reported on soundings and in nets, some nets averaging 2 barrels fish. They were also reported on July 29, in weirs at Long Island and in nets at South Head. In August the fish were reported plentiful at South Head and on soundings. During September good netting of large fish were made at South Head. Few were taken in weirs at Cheney's Head, in October but were too small to be utilized for any purpose. 5,000 half-barrels of pickled herring were taken and 600,000 boxes of small size fish or 'medium' were smoked. About 15,000 barrels of fresh fish were exported to United States. The output of one kippered herring factory at North Head was 2,000 cases, or about 100,000 lbs. fish.

Lobsters were reported on May 17, in fair quantities and the fishing was considered good to the close of the season. This season two factories canned 300,000 lbs., and about 150,000 lbs. of fresh lobsters were shipped to United States.

Mackerel were reported schooling off Pointe Lepreaux on August 19.

64 VICTORIA, A. 1901

Pollock were plentiful during the season and about 4,000 quintals were taken. On May 27, one American schooner was reported seining and returned home to land fare, and about one month later on June 26, American and other vessels were reported destroying pollock with dynamite off the old ledges.

Squid were very scarce during the early part of the season, but from the middle of July, herring bait was obtainable for the remainder of the season.

Dogfish appeared plentiful the latter part of July and also during the month of August.

SHIPPEGAN.

Reporter: Mrs. A. Hammon.

Cod was first taken about May 29 in large quantities. During June the catch was fair and regular, afterwards becoming very scarce inshore, but the bank fishery was good and large hauls were made when not interfered with by bad weather. The catch, though not as large as last year's, is considered an average one and is estimated at 11,000 quintals, a great quantity of which was shipped to foreign ports.

Lobster fishing commenced May 9, in fair quantities and continued so until the close of the season. The fishery was carried on a larger scale this season than before. More factories were in working order, but as the weather was very unfavourable and the catch very small, several of the canneries were compelled to suspend operations in June, and consequently the season's pack is not considered up to the average.

Mackerel were reported on July 23, in nets, but were very scarce and not over 50 barrels were taken the whole season.

Herring did not visit here this season but appeared on the Caraquet Banks July 9. They were taken in fair supply throughout the season.

Salmon were reported fair on June 5, and remained so during the balance of the month. The catch was an average one, most of which was shipped in ice to United States.

The fisheries in general here this season is not as good as those of former years excepting cod, which is given as an average one.

In the storm of September 12, 5 schooners and 20 men were lost from this station and a similar number from Caraquet, which was a great loss to the merchants and distress to poor families.

QUEBEC.

DOUGLASTOWN

Reporter: Mr. Chas. Viets.

Cod were taken in good hauls on May 26, and from good to fair for the balance of the month. During June, July, August and September the catches varied from very good to poor, and fair fishing was reported the early part of October, but poor afterwards, owing to the high winds which prevailed. The bank fishing was reported good this season.

Herring were reported in fair quantities on May 1 and the catch for the remainder of the month varied from very good to poor. They were taking good catches on June 14, 25 and 27. From July 7 to 14, herring were from very good to fair, afterwards poor until September 3 and 4, when good stops were made.

Lobsters when first reported on May 10 were fair and were taken in catches varying from good to poor to the close of the season.

Mackerel.—A few were taken at Sand Beach on July 24.

Salmon were first reported in small quantities at Gaspé Basin on May 23, but were fair on the 26th and 28th, and during June were taken in catches from good to poor. They were not reported afterwards.

Trout were taken in fair quantities from May 28 to 31, and from June 1 to 7.

SESSIONAL PAPER No. 22

Squid.—Fair supplies were obtained on July 25 and 28, and also in August. During September they appeared in quantities varying from very good to poor, and were again fair on October 1, 2 and 3. Clam bait was plentiful in the month of May.

GRAND RIVER.

Reporter: Mrs. John Carberry.

Cod were first reported on May 29 in fair quantities, and the catch inshore continued so for the balance of the season. On the banks codfish were fairly plentiful and good fares were reported to the latter part of August, after which a combination of bad weather and scarcity of bait impeded fishing.

Herring struck in good quantities on May 2, and varied from very good to poor until August, when fishing in general was poor and remained so until the end of October, when herring re-appeared in fair quantities.

Lobsters were reported very plentiful on May 8, but a little later on, bad weather prevented fishing, and the season's catch is considered a poor one.

Mackerel continues very scarce and no reports were received of catches.

Salmon first appeared on June 2 in fair quantities. The catch during the season was small, but fish were of an unusually large size.

Caplin were reported in light quantities throughout the season.

Smelts—The season's catch is considered a fair one.

Squid appeared early in July and sufficient was taken for bait.

Dogfish were in evidence as usual, but were reported to have not been as troublesome as in former years.

LONG POINT.

Reporter: John Vibert.

Caplin were very plentiful on June 14.

Cod were reported fair on June 14, but plentiful on August 7.

Salmon were taken on June 14, the catch was a fair one.

MOISIE RIVER.

Caplin.—Good catches were reported on July 2 and 29.

Cod were fair on July 24 and on August 2, 7 and 28. They were plentiful on September 26.

Salmon were reported plentiful on June 16.

Launce were taken in very good catches in July.

Squid were fair on July 24.

NEWPORT POINT.

Reporter: Mrs. Meunier.

Cod appeared about May 30, and were taken in fair and regular quantities during June and July, after which there was a marked improvement in the fishery. Codfish were very plentiful on August 1, and varied from that to poor during the remainder of the month. Fair catches were reported for the balance of the season, and the total catch is estimated at 10,800 drafts.

Herring struck in good quantities about May 1 to 18, and good catches were made. During the remainder of the season, fair and somewhat irregular catches were reported. Total catch for this season is 2,000 brls. which is one-quarter of last year's catch.

Caplin were first reported on June 11. Very few were taken afterwards.

64 VICTORIA, A. 1901

Lobsters were taken in catches varying from good to fair, from May 1 to 31 inclusive, and to the close of the season, with few exceptions, fair catches were reported. Total pack estimated at 275 cases.

Salmon.—Fair catches were reported from May 29 to July 8.

Squid struck in fair quantities from July 25 to 31. During August the fish varied from very good to fair. Light catches were also reported September 1.

PASPEBIAC.

Reporter : Miss Ada Beck.

Caplin were first taken on June 2 in fair quantities but from the 4th to 7th, inclusive good catches were reported. They were again fair from the 13th to 21st, very few were afterwards taken.

Cod first appeared on June 1, and the catches throughout June, July and August, were fair and regular. Owing to the scarcity of bait and the inclemency of the weather very little was done in this important branch of the fishing industry up to September 21, when cod-fish were reported plentiful. They were again fair on October 4. Nothing afterwards.

Herring struck on May 1, in fair catches which continued for the following day and again on the 12th. They were reported plentiful on the 17th, 18th, 19th and 25th, and fair on the 23rd, and also on June 1. The fishing was poor afterwards to the close of the season.

Salmon.—Fair quantities were reported on May 29, and June 7.

Squid were taken in fair quantities on July 23 and 24, and from August 4 to 9. Very good catches of squid were reported on September 21.

PERCE.

Reporter : Mr. E. G. Tuzo.

Caplin were reported on June 25 in fair quantities, but on the following day were plentiful, and afterwards scarce to the end of the month.

Cod first appeared on May 18, and were taken in good and fair catches to the last of the month. During June the catches were reported good when the weather permitted. Fair fishing was reported in September and from good to poor the early part of October.

Herring struck in very plentifully on May 1, and continued so until the 23rd, with few fair exceptions, and remained fair until June 6, when they were reported plentiful and varied from this to poor to the close of the month. In July, although, the weather was very stormy, catches from very good to poor were made at intervals and in August and September fair and regular stops were made. The fish were not reported in October.

Lobsters were reported in fair quantities on May 3, and the catches varied from good to poor throughout the season. The catch is considered about the same as last years.

Mackerel.—Few were reported going on September 5.

Salmon were reported in fair quantities on May 29.

Squid.—Although reported in good quantities a few days only in July, August and October, were very scarce throughout the season.

On the whole the summer's fishing is considered good, but the fall fisheries have been below the average owing to the very disagreeable weather which prevailed at that period of the season.

SESSIONAL PAPER No. 22

POINTE ST. PETER.

Reporter : Mrs. P. Bond.

Cod first appeared on May 25, and were taken in light catches until the 30th inst. From said date until August 2, the catches ran from good to fair, but were reported scarce afterwards, attributed to unfavourable weather and the scarcity of bait. Throughout the latter part of September and October, there was a marked improvement in the catches. Season's catch estimated at 4,000 quintals.

Herring struck in on May 1 in fair quantities, but were scarce afterwards. Good catches were reported during October.

Lobsters fishing commenced about May 1 and light catches were reported throughout the season.

Salmon were reported from fair to scarce this season.

Squid appeared in large quantities July 26, but afterwards were reported very irregular during the season.

SEVEN ISLANDS.

Reporter : Mr. P. E. Vignault :

Cod were reported scarce the early part of the season up to August 20. From this date and until October 20, fair quantities were taken whenever the weather would admit.

Herring was taken in small quantities during May.

Salmon appeared the last week in May. During June the fish were reported to be very plentiful outside the rivers, but river fishing was very poor.

Squid were in good supply in September and October.

ST. JOHN'S RIVER.

Caplin were taken on June 9 and 14, in good quantities, but were reported very plentiful during July.

Cod were first reported on June 9, fair but plentiful from July 3 to 18. On the 20th they were reported very plentiful. Good catches were also made on October 3.

Launce were very plentiful in June.

Salmon fair reports were received on May 9.

SHELDRAKE.

Caplin were reported plentiful in June.

Cod.—Fair quantities were reported in May and June. On October 3, they appeared plentiful.

Launce.—Good catches were reported in June.

Lobsters were reported plentiful in June.

Salmon and Sardines were reported fair in June.

ST. MARGUERITE.

Cod, fair quantities were taken on July 24.

Launce when reported were very plentiful.

Salmon were fair on July 2 and 29.

64 VICTORIA, A. 1901

ANTICOSTI.

Reporter: Mr. Alfred Malouin:

ENGLISH BAY AND STRAWBERRY COVE.

Caplin appeared plentifully on June 13, and were in great abundance to July 19.

Cod, fishing opened up on June 3 with fair prospects, and were taken in catches from fair to poor during the month. On July 11 and 12, fair hauls were made but notwithstanding the unfavourable weather, good fares were reported on the 16th and 17th. From the 13th to the end of August, cod were fair and boats average from $1\frac{1}{2}$ to 3 drafts. Owing to the scarcity of bait and stormy weather, very little was done in this branch.

Herring struck in June 1, very plentifully and continued so to the 13th, when fair reports were received. They were again very good on the 14th, but scarce afterwards.

Squid were taken in fair quantities on August 27, and September 13, and were scarce for the remainder of the season.

ENGLISH BAY AND STRAWBERRY COVE CATCH.

Dryfish	662 quintals.
Greenfish in barrels.....	219 barrels.
Herring for bait.....	60 "
" salted in barrels.....	26 "
Halibut	11 "
Eels.....	9 "
Shallop Creek, Salmon.....	13 "
" " Trout.....	5 "

FOX BAY.

Cod appeared in good quantities on May 28, but were very plentiful on the 30th, when good catches were made. They were taken in catches from fair to poor during June, and scarce for the balance of the season.

Herring struck in plentiful on May 25, and remained so to the 31st, when they were reported scarce. They were again in great abundance from June 5 to 22, when fair reports were received.

Lobsters were taken in fair quantities from June 13 to July 23.

Lobster factories output were 887 cases and 100 barrels of herring were taken for bait. One Halifax vessel fishing lobsters at Fox bay and coves between here and Salmon river caught, 200 barrels of herring as bait, and her catch of lobsters must have been large, but lost a large quantity having to go to the North Shore to boil and can them.

The name of this vessel and her total catch could not be ascertained.

Five schooners fishing cod at Fox bay captured 700 quintals.

SOUTH-WEST POINT.

Caplin were taken in good and regular catches from June 12 to 29, and were very plentiful from July 1 to 17.

Cod were reported plentiful on June 29, and July 16 to 17. They were taken in fair quantities on August 27.

Squid were very good on August 30, and scarce for the remainder of the season.

SESSIONAL PAPER No. 22

MAGDALEN ISLANDS.

Reporter : Mr. J. A. LeBourdais.

Cod struck the south-west part of the coast about May 10, in fair quantities and continued so mostly throughout the season. The fish were taken by trawlers at some distance off the Islands and the few boats engaged in this fishery reported good catches when the weather was favorable.

Herring.—The spring run struck in April 19, in very large quantities and good catches by nets are reported at Amherst Harbour and from other localities until May 15. Excellent catches of large and fat herring were reported during July and several boats called in for bait. Large quantities were taken here for bait and also for local consumption. Herring was more abundant this season than for many years past.

Lobsters.—First appeared May 2, with good prospects as herring was in great abundance. The fishery was fair from May 7, and remained so until the 17th, when strong easterly weather set in and destroyed mostly all the traps and fishing gear around the islands. After all the traps were repaired and got ready for use again, the lobster season was almost over. The catch, however, can be considered a fair one, as there are now 10 to 20 boats engaged in this fishery as compared with 1 or 2 in former years.

Mackerel appeared May 30, and light catches were made in nets. Large schools struck in June 2 and 4, and the boats made good hauls and reported the fishing as being the best for the past ten years. Fall mackerel did not take the hook freely before July 24, when fair catches were made in different parts of the islands and remained so without any change throughout August and September.

The past season would have been called good fishing in all branches but on account of rough and stormy weather the fishermen were, only permitted to carry on their operations about one-third of the season—hence the catch on the whole can be considered a fair one. It is estimated, during the recent storms along the Magdalen coast that the fishermen lost nets and fishing gear to the amount of 10,000 dollars.

I have the honor to be, sir,
Your obedient servant,

A. D. MACKERROW,
Clerk in charge F. I. Bureau.

